THE AMERICAN ECONOMIC REVIEW

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EDWIN WALTER KEMMERER

Twenty-eighth President of the American Economic Association, 1926

Edwin Walter Kemmerer was born in Scranton, Pennsylvania, June 25, 1875. He died in Princeton on December 16, 1945. He prepared for college at Keystone Academy, Factoryville, Pennsylvania. After receiving a Phi Beta Kappa key and an A.B. degree from Wesleyan University in 1899, he went to Cornell University for two years as a fellow. In 1903 he received his Ph.D. degree, having served as instructor in economics and history at Purdue University in the interval. His doctoral dissertation was entitled, "Money and Credit Instruments in Their Relation to General Prices," a study which helped to equip him for a career as a money specialist. His first public appointment was as financial adviser to the United States Philippine Commission (1903-06). He returned to Cornell University as assistant professor of political economy in 1906, attaining the rank of full professor in 1909. In 1912 he moved to Princeton, where he spent the remainder of his academic life. In 1928 he was appointed Walker professor in international finance and director of the newly-established international finance section at Princeton. He retired from active service in 1943.

Professor Kemmerer served as financial adviser to a number of countries in both hemispheres and formed numerous groups or commissions of experts to investigate and report on currency and fiscal reforms. These accomplishments in the field of public affairs brought him many honors. Academic honorary degrees were granted him by Wesleyan, Occidental, Oglethorpe, Rutgers, Columbia, and by many universities in Ecuador and Bolivia. Nonacademic honors and awards came from Colombia, Poland, Ecuador, and Belgium.

Professor Kemmerer became a member of the Association in 1903, served from 1907 to 1910 as managing editor of the *Economic Bulletin*, predecessor to the *American Economic Review*, and was a member of the Board of Editors of the *Review* from 1911 to 1913. The title of his presidential address in 1926 was, "Economic Advisory Work for Governments."

Most of Professor Kemmerer's publications dealt with currency reforms and the operation of monetary systems under the gold and other standards. He was an uncompromising advocate of the gold standard and such books as the *A B C of the Federal Reserve System* and *Modern Currency Reform* had a tremendous vogue. His later life was devoted to the defense of a convertible currency based on gold. He was president of the Economists' National Committee on Monetary Policy when he died. He had been one of the organizers of this Committee in 1933 and one of its most active members.

An obituary of Edwin Walter Kemmerer, prepared by four of his colleagues at Princeton, was published in the *American Economic Review*, March, 1946, pages 219-221.

Number 28 of a series of photographs of past presidents of the Association.

E. W. Kemmerer

The American Economic Review

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A THEORY OF DELIVERED PRICE SYSTEMS

By GEORGE J. STIGLER*

The debate over the merits and legality of basing point price systems began in the early nineteen-twenties and followed a leisurely course until April 26, 1948. On that day the Supreme Court outlawed the multiple basing point price system in cement, and the debate now became continuous and urgent, and sometimes disingenuous. The debate has been unusual in that the participants have commonly used the same, relatively undisputed facts to support opposite contentions. The cross-hauling of products has been interpreted by one party as a by-product of innocent competition, by the other party as evidence of collusion. The absorption of freight has been used by one party as evidence of the desire of firms to compete, by the other party as evidence of price discrimination.

If it is true that controversy over basing point prices has sometimes manufactured uncertainty, it is also true that uncertainty among economists has encouraged the controversy. No economist, so far as I know, has yet offered a satisfactory explanation for the appearance of delivered price systems. One important branch of the literature, associated with the names of Fetter and Mund and with the Federal Trade Commission, argues that basing point prices are simply a device hit upon by conspiring oligopolists.[1] The other important branch of the literature, in which de Chazeau and J. M. Clark are prominent names, argues that the basing point price system is an inevitable or highly probable development in industries characterized by heavy fixed costs, cyclically unstable demands, and oligopoly. Neither group has explained why this particular system of marketing evolved (rather than

* The author is professor of economics at Columbia University.

[1] Professor F. Machlup's recent *The Basing-Point System* (Philadelphia, Blakiston, 1949) is also in this tradition. At several points he also touches on the fundamental element of the theory to be presented in this paper (pp. 165-66, 197, 211-12), as, indeed, do most of the writers on the subject.

possible alternative systems such as division of territory) nor has either group explained why other industries which share the characteristics they stress have adopted f.o.b. and other pricing systems.[2]

If the explanation to be given here is correct, basing point prices represent a collusive oligopolistic policy which maximizes the oligopolists' profits under particular but not uncommon economic and legal conditions. I, therefore, accept the positive contentions of both groups and seek to reconcile them through a study of the detailed rationale of delivered price systems. After a preliminary discussion of terminology, the theory of uniform delivered prices will be sketched, tests of the theory will then be examined, and finally the major implications of the theory for economic policy will be drawn.

I. *Types of Geographical Price Systems*

The price a buyer pays for a delivered commodity may vary continuously with the distance of the point of delivery from the point of production, or it may vary discretely or not at all (zone price systems). The chief forms of price quotation that lead to continuously variable delivered prices are:

a. F.o.b. mill prices. The delivered price at any point equals the price at the production center at which the purchase is made plus the actual transportation charge to the point of delivery.

b. Freight equalization. The delivered price at any point equals the lowest sum of factory price plus transportation charges from any production center, even though the purchase is made at another production center.

c. Basing point. This system differs from freight equalization in that not all production centers quote mill prices.[3]

These distinctions are quantitative, and not generic. If transportation costs are a trifling fraction of delivered prices, all systems of variable delivered and zone prices merge.[4] If there are mill price quotations

[2] Professor A. Smithies, who falls in neither group, concluded that the basing point price system did not in general maximize profits and, indeed, that it was comprehensible only under special assumptions whose relevance to the basing point industries was not demonstrated and is not obvious. See "Aspects of the Basing Point Price System," *Am. Econ. Rev.*, Vol. XXXII, No. 4 (Dec., 1942), pp. 705-26.

[3] If one does not wish to treat importation points as production centers, a second general difference is that not all points of mill price quotation are production centers.

[4] Zone prices will also emerge in a continuously variable delivered price system if transportation costs do not vary continuously with distance: for example, in the late 'thirties Douglas fir had the same transportation cost from the Pacific Northwest to all points north of the Ohio River and east of Chicago, so equality of price in this region was consistent with f.o.b. mill pricing. Such exceptions are eliminated if we define distance as economic distance.

(basing points) at all important production centers, the distinction between freight equalization and basing point prices is unimportant. If the price at one mill is equal to that at the nearest mill plus transportation cost, the former price is non-effective and a basing point system is achieved. The fundamental distinction is between f.o.b. mill and delivered price systems when freight costs are an appreciable fraction of price, and we proceed now to establish analytical criteria for this distinction.[5]

Consider first the common situation in which there are two or more firms at a production center. A firm at this center can increase its sales, relative to what they would be if the firm adhered to the same f.o.b. mill price as its rivals, by two types of price reductions: first, by price reductions within the natural territory of the center (say that defined by stable f.o.b. mill prices); and second, by absorbing freight in order to enter other production centers' territories. If the firm makes price reductions (reductions in mill-net prices) only or chiefly by absorbing freight, and never or seldom by reducing prices to customers in its natural territory, it is practicing what I shall term systematic freight absorption. If the firm frequently uses both price reductions within its territory and freight absorption, I shall term its behavior competitive.[6] If the firm seldom makes either form of price reduction, it is presumably a participant in an agreement to divide the market and fix the price.

If there is only one firm at a production center, it can take sales from other firms only by invading their natural territories. The preceding argument still applies, but it must be restricted to the sales in areas where two or more firms are selling: it is difficult to define competitive behavior in areas where there are no competitors. The hypothetical example in Table I will illustrate this case. If Firm I practices systematic freight absorption, its mill-net price declines as it makes sales beyond its natural market limit (F); in the area of overlapping sales (say D to H) the only form of (mill-net) price reduction is through freight absorption. If the firm behaves competitively, it will reduce the delivered price at points where its mill-net price is highest (D to F in our example) in order to take sales away from Firm II, before it begins absorbing freight to enter H's natural territory; so in the area

[5] Zone price systems will not be discussed; see, however, note 15, below.

[6] It would be inexplicable if the firm reduced its price (relative to that of its rivals) within its territory and yet failed to absorb freight on some sales.

If the firm behaves competitively, on the above definition, its prices are indistinguishable from f.o.b. mill prices. This definition of competition is identical with that of the neoclassical theory if the latter is amended (as it should be) to incorporate the fact that on all except completely centralized exchanges the competitive firm sells at different prices to different customers in a period of price change.

of overlapping sales, I's mill-net price will not vary systematically with the point of sale.

Both situations—one and several firms at a production center—can be summarized in one definition of systematic freight absorption. A firm is practising systematic freight absorption if, at the consuming

TABLE I.—NUMERICAL EXAMPLE OF SYSTEMATIC FREIGHT ABSORPTION
(mill prices: $50.00)

Consumption Point	Transportation Costs from		Delivered Price	Mill-Net Prices	
	Firm I	Firm II		Firm I	Firm II
A	$ 0	$10	$50	$50	$40
B	1	9	51	50	42
C	2	8	52	50	44
D	3	7	53	50	46
E	4	6	54	50	48
F	5	5	55	50	50
G	6	4	54	48	50
H	7	3	53	46	50
I	8	2	52	44	50
J	9	1	51	42	50
K	10	0	50	40	50

points where it and one or more rivals are making sales, its mill-net price varies with the distance of the consuming point.

Systematic freight absorption occurs only under oligopoly. It involves price competition at the point of production and is therefore inconsistent with substantial competition: the mill-net price of a firm is less on sales made at delivered prices set by other mill prices (price bases) than on sales made on its own mill price, and under competition the firm would sell only or chiefly in the higher mill-net area.[7] Nor would a monopolist with spatially separated plants practice systematic freight absorption, for this would be irrational price discrimination. He would be varying his mill-net price, not in accordance with the elasticity of the buyer's demand, but on the basis of the selection of the plant from which to ship the order.

The desirability of this definition of systematic freight absorption (and the implicit definition of delivered price systems) must be judged by its usefulness. The definition clearly suggests that the formal method

[7] This is seldom disputed except in partisan arguments, and then only with astonishing implicit definitions of competition. One all-too-common definition of competition in this context is the policy of maximizing profits! For example, "As has been pointed out, mills at a considerable distance from a basing point have a freight advantage over other mills in selling to buyers in the territory around their mills. They behave competitively and naturally when they charge their customers a price which realizes that advantage." (U.S. Steel Corporation, *The Basing Point Method of Quoting Delivered Prices in the Steel Industry*, T.N.E.C. Monograph No. 42, p. 66.)

of price quotation is insufficient to classify an industry's geographical price system, and this is a source of difficulty in testing theories to which we shall return.

II. *A Theory of Delivered Prices*

The following analysis is restricted to industries in which (1) transportation costs are a substantial fraction of delivered price for many customers; (2) there are few firms (or few large firms) at a production center; and (3) these firms wish to (or are compelled to) collude. The firms in these industries must solve two problems: how to divide sales among the firms at each production center;[8] and how to divide sales among production centers—in such a way as to maximize the industry's profits.

The distribution of sales among firms at a production center must be on a non-price basis if mutually unprofitable price rivalry is to be avoided: the simplest legal solution of this problem would be to use f.o.b. mill prices and rely upon non-price competition to divide sales among firms.[9] Any delivered price system is slightly inferior for this purpose because it requires additional calculations and therefore gives rise to additional errors and sources of misunderstanding among the firms. There have been many quarrels in the basing point price industries over rounding off numbers at different decimal points, the uncertainties of land-grant freight rates on purchases by the federal government, trucking and water transportation, etc. But the inferiority of the delivered price system is only slight.

The second problem, the division of sales among production centers, could also be solved by f.o.b. mill prices,[10] were it not for one characteristic of demand, which on our theory is the fundamental requirement for a uniform delivered price system. This characteristic of demand is that it is geographically unstable, *i.e.*, the proportion of national or regional sales made in each consumption center is subject to substantial fluctuations. If a production center were to make all its sales within a given area, it would often be in a state of feast or famine relative to the industry.

With an unstable geographical pattern of demand, f.o.b. mill pricing

[8] Our primary interest is in the case where there are two or more firms at each of the important production centers because this appears to be more important empirically. It is one of the minor mysteries of the basing-point literature that almost all the analysis has been devoted to the case where there is only one firm at each production center.

[9] Several illegal systems, such as quotas or a joint sales agency plus quotas, might be more efficient. In the markets for homogeneous raw materials, however, non-price competition is not likely to become very expensive.

[10] Or by division of market areas—which indeed would be the effect of a stable system of f.o.b. mill prices.

would have one of two consequences in industries making non-storeable products. The firms at a production center might maintain stable prices (relative to other production centers), and then fluctuations in their rate of output would be large.[11] Not only would this unstable rate of production raise the costs of producing given outputs, but it would put a severe strain on the agreement among the firms: some firms would be losing money while other firms (perhaps multiple-plant firms with a plant in the same production center) were prospering. Or, alternatively, the price at the production center would fluctuate in response to changes in demand: rising high in feast periods to attract output from other production centers; falling low in famine periods to permit sales in other territories. This sort of unpremeditable flexibility of mill prices would make it extremely difficult to maintain collusion among firms at the production center, and even more difficult to maintain collusion between firms at different production centers.

These objections to f.o.b. mill pricing lose some weight if the product is storeable. Then stable rates of production may be reconciled with unstable rates of sale, through inventory adjustments. Yet inventory adjustments are not likely to eliminate the problem. If the product comes in many sizes and qualities, inventories would have to be enormous: for example, the specifications for steel products are so various that inventories do not provide a feasible method of meeting local fluctuations in demand.[12] The method of inventory adjustment is completely satisfactory only if fluctuations in the geographical pattern of demand cancel out quickly.[13]

If collusion could be complete—if the practices of a monopolist could be adopted—f.o.b. mill pricing would still be possible. The oligopolists could establish a joint sales agency, which would refer each order to the firm whose rate of production and distance from the buyer made it the most profitable source from which to fill the order. The group could compensate firms whose outputs were small in a given period at the cost of firms whose outputs had been large. A joint sales agency, however, is as easily detected as it is illegal under our antitrust laws.

Systematic freight absorption provides a satisfactory solution to all these problems. There is a single price at each point in the market (if

[11] At times the output of the production center would have to be impossibly large: for example, some large Western construction projects simply could not have been supplied within the permitted time by Western steel and cement capacity.

[12] It is interesting to notice that the cement industry considers its product to be perishable; see *Argument of George S. Leisure* (New York, Grosby Press, 1942), pp. 77-78.

[13] If the aggregate demand for the product of the industry is also cyclically unstable, there is an additional objection to the method of inventory adjustment. Inventories will be accumulated in regions in which recession first occurs, in the belief that this recession is an instance of geographical instability.

transportation charges are agreed upon), so price rivalry is eliminated. One production center can sell in the "natural" territories of other production centers when this is necessary to obtain its share of the industry's sales; these distant sales involve freight absorption, moreover, and are therefore partly self-limiting. The various prices need not change often, so collusion is possible. Given the unstable geographical pattern of demand and the antitrust laws, systematic freight absorption permitted efficient collusion.

Cross-hauling (simultaneous and geographically overlapping shipments from various production centers) is commonly held to be an important by-product of systematic freight absorption. It is difficult to see why cross-hauling should arise because of the inherent nature of the system: production center A will be selling in the area of production center B only when it cannot sell its share of the industry's sales in its own area, and, therefore, when B will not be selling in A's territory. Some cross-hauling will occur because of the variable time interval between orders and deliveries; this type of cross-haul would also exist under competition and probably under monopoly. Some cross-hauling will also occur because of the desire of firms to keep sales agencies in important markets, and this type of cross-haul (with more shipping of products and less of salesmen) is attributable to oligopoly. One would not expect cross-hauling to be a major waste under systematic freight absorption, however, and there is no empirical evidence that contradicts this expectation.[14] This is not to say that a system of distribution designed to insure a stable share of total sales for each production center will be efficient from the social viewpoint, for it will not be.

The choice by the industry between freight equalization and a basing point system will be determined primarily by the nature of the production centers. If the production centers are well separated, freight equalization is simple and satisfactory. If production centers are spread out, so the firms at a center are not equi-distant (in terms of transportation costs) from the important consumption centers, a basing point system will eliminate numerous minor complexities that would arise under freight equalization. The distinction betwen the two systems, however, is less significant and durable than that between f.o.b. mill and delivered prices.[15]

[14] Some writers use "cross-hauling" to describe all wastes in transportation (given the location of the mills); see Federal Trade Commission, *Price Bases Inquiry* (Washington, 1932), Chap. VIII. The issue is largely terminological, but the measures of the uneconomic movement of goods—it was assumed by the Federal Trade Commission that freight absorption measures this movement—are seriously deficient.

[15] The theory will not be elaborated to consider plant location, number of price bases, inter-base differentials, etc. In general, the more unstable the geographical pattern of demand the fewer will be the production centers (since each firm will locate where it can sell in many territories) and the fewer will be the base prices. Single base prices will be

TABLE II.—CONTRACT AWARDS FOR REINFORCING STEEL BARS, 1936[a]
(in tons)

Region and State	Quarter			
	First	Second	Third	Fourth
Northeastern States				
Connecticut	750	750	100	660
Maine	0	0	200	0
Massachusetts	1,276	2,005	2,908	3,315
New Hampshire	0	0	100	0
New Jersey	1,760	1,755	2,826	2,270
New York	15,340	4,200	14,088	4,169
Pennsylvania	6,400	5,700	425	950
Rhode Island	1,010	0	500	100
Vermont	0	0	150	240
North Central States				
Illinois	10,768	6,406	13,670	5,755
Indiana	700	920	1,325	800
Iowa	0	0	0	625
Kansas	1,700	350	0	0
Michigan	3,150	0	600	400
Missouri	2,855	925	1,375	750
Ohio	650	2,950	715	2,000
Wisconsin	945	1,550	985	653
Western States				
Arizona	525	528	0	0
California	43,874	31,901	30,185	20,039
Colorado	1,128	8,412	4,343	7,356
Idaho	122	0	125	518
Montana	15,891	726	3,575	152
Nevada	100	681	0	502
New Mexico	197	697	0	1,255
Oregon	100	1,315	0	124
Utah	0	0	0	280
Washington	4,509	2,282	706	117
Wyoming	357	389	597	0
Southern States				
Delaware	0	250	0	0
Kentucky	0	750	500	0
Maryland	2,700	0	0	0
Tennessee	0	0	300	0
Washington, D.C.	2,500	0	1,365	0
West Virginia	0	0	360	0

[a] Compiled from *Iron Age*, 1936.

used when a single production center is so large that it must often sell in every territory and other production centers are accordingly so small that they seldom need to sell to or past the dominant production center. (Obviously, if almost all production takes place at one center, there can be no systematic freight absorption or, for that matter, a problem of geographical prices.) Geographically unstable demand may lead to zone prices if transportation costs are not uniquely determinable; some of the late nineteenth century pools may be examples.

The system of formula differentials between prices of multiple products provides close analogies to systematic freight absorption.

III. *Testing the Theory*

We shall briefly discuss tests of the foregoing theory that create some presumption for its validity and then suggest further tests which have not been carried out.

Industries providing materials for large construction projects are likely to have geographically unstable demands; indeed this expectation gave rise to the theory. A sample investigation of contract awards for reinforcing steel bars, summarized in Table II, amply confirms the expectation.[16] The instability is more clearly brought out by the

TABLE III.—PERCENTAGES OF UNITED STATES CONTRACT AWARDS FOR REINFORCING STEEL BARS IN LEADING CONSUMING STATES, 1936

State	Quarter			
	First	Second	Third	Fourth
California	36.8	42.3	36.8	37.8
Colorado	.9	11.2	5.3	13.9
Illinois	9.0	8.5	16.7	10.9
Massachusetts	1.1	2.7	3.5	6.3
Montana	13.3	1.0	4.4	.3
New York	12.9	5.6	17.2	7.9
Pennsylvania	5.4	7.6	.5	1.8

percentage distribution of contract awards among the important consuming states (Table III).[17] The longer-term instability of demand is also implicitly illustrated by these tables: for example, California consumed almost four-tenths of the bars but had less than one-fifteenth of the industry's capacity to produce bars, while the chief producing states (Pennsylvania, Ohio, and Illinois) consumed relatively little.[18]

It was argued above that f.o.b. mill prices would have to be very flexible relative to one another in order to reflect the shifting locus of demand and thus permit the sales areas of production centers to expand and contract—so flexible, in fact, as to make collusion impracticable. We may test this view by a comparison of prices in a period of f.o.b. mill

[16] The data exaggerate the short-run geographical instability of demand because they include only contracts for 100 or more tons, which are no doubt less stable geographically than the smaller orders. The awards cannot be compared accurately with total production because of the unknown time lags in filling orders, but it appears that about 35 per cent of total sales in this period are accounted for by these contracts.

[17] Monthly contract awards, of course, show much greater instability. The correct time period for our theory will vary with the industry (being longer if inventories are possible) and with the variance of the time interval between orders and deliveries. It is interesting to notice that the California tonnages become much more erratic if the quarters are shifted back one week: 41,351; 15,969; 46,360; and 21,804 respectively.

[18] See *Directory of the Iron and Steel Works of the United States and Canada, 1938* (New York, American Iron and Steel Institute, 1938), p. 441.

pricing with those under basing point pricing (Table IV). Unfortunately, the same commodities cannot readily be used for both periods, but each seems representative of its period for the question in hand;[19] in both periods the demand for steel was rising. The comparison is qualified by the unknown amount of collusion in the earlier period and by

TABLE IV.—COMPARISON OF STEEL PRICES IN THREE MARKETS 1898–99, 1939–40[a]

Market	1898–99 Steel Billets	1939–40 Steel Bars
Pittsburgh		
Possible price changes	51	103
Price changes	27	1
Philadelphia		
Possible price changes	51	103
Price changes	38	1
Chicago		
Possible price changes	48	103
Price changes	21	1
Pittsburgh-Philadelphia Differential		
Possible changes in differential	51	103
Changes in differential	39	0
Pittsburgh-Chicago Differential		
Possible changes in differential	48	103
Changes in differential	34	0

[a] Based on Tables A and B, appendix.

the uncertainty of the significance of quoted prices in both periods. Nevertheless, the prediction of the theory is dramatically confirmed as to both the frequency of price changes with f.o.b. mill and basing point prices and the stability of differences between prices at different production centers.[20]

Still another type of test of the theory is provided by changes in the behavior of basing point price industries in periods when the demand for their products is geographically stable: the theory predicts that systematic freight absorption will diminish. Steel has had such a demand stability in the postwar years because the industry has been practicing non-price rationing of buyers: the individual plant can sell all it wishes at its mill-net price. The prediction of the theory is fully confirmed:

[19] Billets had a much broader market in the earlier period, when vertical integration had not progressed so far.

[20] The collusive character of inter-base price differentials in the later period is shown in detail by de Chazeau; see D. R. Daugherty, M. G. de Chazeau, and S. S. Stratton, *Economics of the Iron and Steel Industry* (New York, McGraw-Hill, 1937), Vol. 2, Chap. XIII.

> Since the war almost all mills have stopped selling some products in certain distant markets and some mills have withdrawn on all products from some areas. . . .
>
> In today's seller's market it is actually possible for a steel company to reduce its freight bill in the face of rising freight rates by careful choice of customers and market areas. . . .
>
> Other f.o.b. mill sales are less obvious but it is known that some customers have been able to buy on f.o.b. mill pricing where it was a case of no discrimination; where the customer realized he was outside a mill's present market area and specifically asked for an f.o.b. mill price so as to get steel. Not all mills will sell this way.[21]

The practice of quoting an arbitrary Detroit base was also abandoned.[22]

The instability of the geographical pattern of demand in cement has been emphasized by the industry,[23] and it is documented by the geographical instability of concrete paving work and large construction projects.[24]

Our theory predicts that in industries with unstable geographical patterns of demand, the relative distribution of production among production centers will be more stable than the relative distribution of consumption under a basing point price system, whereas the two distributions would be about equally unstable with f.o.b. pricing.[25] Were it not for the merging of the market areas of individual mills in the reports of the Bureau of Mines (no doubt because of disclosure prohibitions), it would be possible to compare exactly the relative stability of consumption and production in each mill area. The best that can be done with the published data is to make such a comparison for certain adjoining states (Illinois, Iowa, Kansas, and Missouri).[26] The percentage of aggregate production and consumption (in the four states) has been calculated for each state for the period 1921 through 1940,

[21] *Iron Age*, May 13, 1948, pp. 119-20; see also *New York Times*, December 6, 1947, p. 23.

[22] Jones and Laughlin withdrew sheets and strip, and Republic and Carnegie-Illinois withdrew alloy bars, from the Detroit arbitrary base, *Iron Age*, May 13, 1948, p. 120.

[23] See Aetna Portland Cement Company *et al. v.* Federal Trade Commission, in the United States Circuit Court of Appeals of the Seventh Circuit, October Term, 1945, Appendix A to Brief of Respondents-Petitioners, pp. 80 ff.

[24] For data on city and state paving (in which one-fourth of all cement is normally used), see annual issues of *Cement and Concrete Reference Book.*

[25] Provided the inter-base price differentials were stable, as they appear to have been in cement; see Federal Trade Commission, *Cement Industry* (Washington, 1933), Exhibit Tables 9 and 10.

[26] Each of the states has four to six mills. Indiana is not reported separately; this distorts our analysis because it is the leading source of the Chicago market (indeed an Indiana mill is the base that sets the Chicago price). See annual issues of *Minerals Yearbook.*

and the coefficients of variation of these percentages are tabulated below:

State	Coefficient of Variation	
	Per Cent of Aggregate Production	Per Cent of Aggregate Consumption
Illinois	7.5	11.0
Iowa	12.2	19.6
Kansas	12.7	20.4
Missouri	5.9	15.1

In each state relative consumption was more variable than relative production, as the theory predicts.

Our theory makes collusion a requirement for a delivered price system. In industries where there are few large firms, collusion (whether tacit or overt) or coercion is usually more profitable to every large firm than price competition. Therefore, however proper the legal principle that the defendant is presumed to be innocent of conspiracy, it has no place in economics. Indeed the presumption is the opposite: it is more appropriate for the economist to ask why oligopolists compete as often as they do.

In the cement and steel industries, the evidences of overt collusion are ample. The basing point price system was put on a firm basis in the steel industry under Judge Gary's iron-hand-in-velvet-glove regime, and it was greatly strengthened under the N.R.A. The testimony in the cement case contains many instances of overt collusion. Foreign experience in these industries reinforces the conclusion that collusion is necessary to delivered price systems. The German cement industry was on a f.o.b. mill price system until a cartel was formed, after which it used delivered prices.[27] The German steel cartel used a basing point system,[28] and the English steel industry abandoned f.o.b. mill pricing for a delivered price system in the nineteen-twenties, after amalgamation and federation had proceeded far.[29]

The bituminous coal industry supplies some excellent illustrations of

[27] K. Ehrke, *Übererzeugung in der Zement Industrie von 1858–1913* (Jena, Gustav Fischer, 1933), pp. 14-15, 161.

[28] See *Die Deutsche Eisenerzeugende Industrie*, in *Ausschuss zur Untersuchung der Erzeugungs—und Absatzbedingungen der deutschen Wirtschaft* (Berlin, E. S. Mittler, 1930). A joint sales agency was used, but the collusion was not complete. Each of the large firms maintained a sales organization because, in the words of F. Thyssen, "one fine day the cartel could go up in air . . ." (*ibid.*, p. 315).

[29] See D. L. Burn, *The Economic History of Steelmaking, 1867-1939* (Cambridge, 1940), p. 377.

the role of collusion.[30] In the United States, coal was sold f.o.b. mine when the industry was not regulated; under the National Bituminous Coal Act of 1937, delivered prices were set and limited freight absorption was permitted and in some circumstances phantom freight required.[31] In Great Britain the development was parallel: f.o.b. mine prices were used before the compulsory cartelization of 1930; thereafter the industry moved toward a delivered price system.[32] The highly developed Rhenish-Westphalian syndicate was able to act like a monopolist for it had control over the marketing of all coal in the "uncontested" areas, and it set f.o.b. mine prices.[33]

Delivered price systems have been alleged or shown to exist in cast iron pipe;[34] rigid steel conduit;[35] various kinds of lumber;[36] copper, lead, and zinc;[37] plaster and lime;[38] plate glass;[39] floor and wall tiles,[40] and numerous other industries.[41] Some of these industries very probably have unstable geographical patterns of demand, for example, cast iron pipe, rigid conduits, and building materials.[42] In other of these

[30] The geographical pattern of demand for coal is apparently much more stable than tnat of steel and cement, but this is offset by the greater density of producing centers. On the pattern in Germany, see Johannes Schröder, *Der Absatzraum der Ruhrkohle* (Gieszen, Otto Kindt, 1929).

[31] R. H. Baker, *The National Bituminous Coal Commission* (Baltimore, Johns Hopkins University Press, 1941), pp. 140-41, 157, 193-94.

[32] See the annual survey numbers of the *Iron and Coal Trades Review,* for example, January 15, 1937, pp. 90-91; January 21, 1938, pp. 82-83.

[33] See J. H. Jones, G. Cartwright, and P. H. Guenault, *The Coal-Mining Industry* (London, Pitman and Sons, 1939), pp. 274-75. The Belgian cartel used a multiple basing point price system (*ibid.*, pp. 227-28).

[34] Clair Wilcox, *Competition and Monopoly in American Industry,* T.N.E.C. Monograph No. 21, p. 157.

[35] Triangle Conduit and Cable Co. *v.* Federal Trade Commission, 168 Fed. 2d 175 (1948).

[36] T.N.E.C. Monograph No. 33, *Geographical Differentials in Prices of Building Materials,* Chap. XIII; A. R. Burns, *The Decline of Competition* (New York, McGraw-Hill, 1936), pp. 291 ff.

[37] F. A. Fetter, *The Masquerade of Monopoly* (New York, Harcourt Brace, 1931), Chap. XIV.

[38] T.N.E.C. Monograph No. 33, Chaps. IV, VII.

[39] U.S. Tariff Commission, *Plate Glass,* Report 110, Second Series (Washington, 1936), p. 25.

[40] U.S. Tariff Commission, *Earthen Floor and Wall Tiles,* Report 141, Second Series (Washington, 1941), pp. 86 ff.

[41] There is also some evidence of the equivalent of delivered price systems on the buying side in the cottonseed industry (Federal Trade Commission, *Report on Cottonseed Industry* [Senate Doc. 209, Part 13, 71st Cong. 2d Sess.], esp. pp. 15,823 ff.) and in the buying of crude petroleum and iron scrap.

[42] The wire rope industry also shares this demand characteristic; see *Study of Pricing Methods* (Hearings pursuant to S. Res. 241 [the so-called Capehart Committee], pp. 311-12).

industries it is doubtful that freight absorption is systematic.[43] The one industry in which it seems probable that the geographical pattern of demand is stable and yet delivered prices are adhered to is beet sugar; I have not been able to establish definitely that it is an exception.[44]

Other tests of the theory, which have not been undertaken, can easily be suggested. Pig iron was sold f.o.b. mill before the N.R.A., thereafter, it was sold on a basing point system. According to our theory, this change is due to increasing oligopoly or increasing instability of demand. It is said that cement was sold f.o.b. mill on the Pacific Coast; if true, this case has similar implications to be tested.

The most general and satisfying test would be provided by a general measurement of the geographical instability of demand in oligopolistic industries, which could be compared with the pricing practices of these industries. If the industries with relatively unstable geographical demand patterns used chiefly delivered prices, and those with stable geographical demand patterns chiefly f.o.b. mill prices, it could not be doubted that the theory contains a large element of the correct solution.

This test does not seem feasible with the data now published. The most promising source of information on demand patterns is the quarterly reports on terminations of classes of railroad freight by states.[45] Unfortunately, this series does not extend back of 1940 (except by broad geographic areas); it lumps together wide classes of commodities; and often the state is too large a unit. The other serious problem, already referred to, is the inconclusiveness of the formal method of price quotation. The data necessary to measure the geographical instability of demand and the extent of systematic freight absorption exist in the sales ledgers of the firms, to which the academic investigator cannot always obtain access.

[43] In copper, for example, the existence of a single basing point is doubtful. Most refineries are near New York, most consumers in New England. "The quotation is almost always on a delivered basis—that is, the seller pays the freight to the buyer's plant. Sellers are willing to sell f.o.b. refinery, however, should the buyer so desire." E. H. Robie, "The Marketing of Copper," *Engineering and Mining Journal-Press,* April 21, 1923, pp. 704-9, quotation at p. 707.

[44] Corn sirup is also mildly troublesome. It was long quoted on a single base (Chicago). The geographical pattern of demand appears to be stable, at least in the short run. One is tempted to explain the single base by the geographical concentration of production and consumption. Over half the corn sirup is made in Illinois and most of the remainder in neighboring states. The chief demand for corn sirup is in candy and confectionery, and 30.5 per cent of the candy was made in Illinois in 1939 and only 8.2 per cent in all the other states producing large amounts of corn sirup. (See *Census of Manufactures, 1939.*) The Chicago base price therefore involved only a small amount of irrational (profit-reducing) price discrimination, and simplified the price structure.

[45] Interstate Commerce Commission, Tons of Revenue Freight Originated and Tons Terminated in Carloads by Groups of Commodities and by Geographic Areas (Statement No. Q-550 [S.C.S.]).

IV. *Conclusion*

If our theory of delivered prices is correct, we may easily dispose of the chief criticism that is made of the cement decision: that it will divide the nation into many local monopolies. Quite aside from the fact that this statement is wholly ambiguous (in that it tells us nothing of how strong these local monopolists will be), it is simply wrong because it overlooks the normal instability of demand in these industries. The individual plant cannot operate efficiently with an unstable demand in the area of its production and must therefore frequently invade other plants' areas.

The immediate effect of f.o.b. mill pricing in a period of non-price rationing is of course to increase the revenues of firms which have been absorbing freight.[46] With the restoration of price rationing and the customary geographical instability of demand, f.o.b. mill pricing will require a flexibility of prices that will often be beyond the reach of colluding oligopolists, so we may expect more frequent outbreaks of price competition. A period of increasing price competition may lead to either further mergers or alternative forms of collusive marketing, or to increasingly competitive behavior of these industries. The relative probabilities of these two outcomes depend chiefly on other and more fundamental elements of our antitrust policy than the prohibition of price discrimination.

[46] The steel industry also raised its mill prices at the time it shifted to f.o.b. mill pricing: semi-finished products rose 10 per cent and finished products 20 per cent from May to July, 1948 (*Steel*, January 3, 1949, p. 303).

APPENDIX

TABLE A.—PRICE OF STEEL BILLETS AT PHILADELPHIA, PITTSBURGH, AND CHICAGO, 1898-99[a]
(per ton)

Date			Price			Excess over Pittsburgh Price	
			Pittsburgh	Philadelphia	Chicago	Philadelphia	Chicago
1898	July	6	$14.50	$16.50	$16.25	$2.00	$1.75
		13	14.50	16.50	16.25	2.00	1.75
		20	14.50	16.50	15.75	2.00	1.25
		27	14.50	16.50	15.75	2.00	1.25
	August	3	14.50	16.25	15.75	1.75	1.25
		10	15.25	17.00	16.00	1.75	.75
		17	15.90	18.00	16.50	2.10	.60
		24	16.00	17.75	16.50	1.75	.50
		31	16.00	17.75	17.00	1.75	1.00
	September	7	16.00	18.00	17.50	2.00	1.50
		14	16.00	17.75	17.50	1.75	1.50
		21	16.00	18.00	17.00	2.00	1.00
		28	16.00	17.75	17.00	1.75	1.00
	October	5	15.75	17.75	17.00	2.00	1.25
		12	15.50	17.75	17.00	2.25	1.50
		19	15.50	18.00	17.00	2.50	1.50
		26	15.50	17.75	17.00	2.25	1.50
	November	2	15.15	17.25	17.00	2.10	1.85
		9	15.00	17.25	17.00	2.25	2.00
		16	14.85	17.00	17.00	2.15	2.15
		23	15.25	17.00	17.00	1.75	1.75
		30	15.25	17.00	17.00	1.75	1.75
	December	7	15.50	17.25	17.00	1.75	1.50
		14	16.00	17.25	17.50	1.25	1.50
		21	16.00	17.35		1.35	
		28	16.25	18.50	17.50	2.25	1.25
1899	January	5	16.25	18.55	17.50	2.30	1.25
		11	16.50	18.90	18.25	2.40	1.75
		18	16.50	19.50	18.50	3.00	2.00
		25	17.25	19.10	18.50	1.85	1.25
	February	1	17.25	19.25	18.50	2.00	1.25
		8	17.25	19.50	18.50	2.25	1.25
		15	18.00	20.50	20.00	2.50	2.00
		22	19.50	22.00	21.00	2.50	1.50
	March	1	22.00	24.00	23.00	2.00	1.00
		8	23.50	25.50	23.50	2.00	0.
		15	25.50	26.00	24.00	.50	−1.50
		22	25.50	26.00	25.50	.50	0.
		29	25.00	26.50	25.50	1.50	.50
	April	5	25.00	28.00	25.50	3.00	0.50
		12	25.50	27.50	25.50	2.00	0.
		19	25.50	27.50	25.50	2.00	0.
		26	25.50	28.00	25.50	2.50	0.
	May	3	26.00	27.50	25.50	1.50	−0.50
		10	26.00	28.50	27.50	2.50	1.50
		17	27.00	29.00	28.00	2.00	1.00
		24	28.00	29.75	28.50	1.75	.50
	June	1	29.00	30.50		1.50	
		8	30.00	31.00	32.00	1.00	2.00
		14	31.50	31.50	32.50	0.	1.00
		21	31.50	34.00	34.00	2.50	2.50
		28	31.50	34.00		2.50	

[a] Compiled from *Iron Age*.

TABLE B.—PRICE OF STEEL BARS AT PITTSBURGH, PHILADELPHIA, AND CHICAGO, 1939–40[a]
(per pound)

Date	Price			Excess over Pittsburgh Price	
	Pittsburgh	Philadelphia	Chicago	Philadelphia	Chicago
1939 January 7	2.25	2.57	2.25	.32	0.
...					
...					
...					
May 13	2.25	2.57	2.25	.32	0.
May 20	2.15	2.47	2.15	.32	0.
...					
...					
...					
December 23	2.15	2.47	2.15	.32	0.
1940 ...					
...					
...					
December 28	2.15	2.47	2.15	.32	0.

[a] Compiled from *Steel;* no price changes in unreported weeks.

THE PROBLEM OF CAPITAL ACCUMULATION

By Ernest H. Stern*

I

The net investments of each year, that is the net additions to the stock of durable equipment capable of producing goods or services, add to our productive capacity and, generally, to output. That growth requires that income, the measure of demand, should grow along with net investment if the existing balance between total supply and total demand is to be maintained. Credit is due to Professor Evsey D. Domar for having directed attention to the dynamic effect of investment.[1] If the net investments (I) of each year are α per cent of the output of that year, and their capacity to produce were s per cent of the net investments of each year, our total capacity to produce and, if all the capital stock were employed, our total output would rise at an annual rate of αs per cent. The Keynesian thesis, on the other hand, made any increase of income dependent on, and corresponding with, an increase of investment over the investment in the preceding period. According to that thesis, the income and therewith total demand grows at the rate of $K\Delta\alpha$ per cent where K is assumed to be a fairly stable factor dependent on the consumption and saving habits of a society. From the Keynesian thesis it follows that if $\Delta\alpha$ is zero, income will not rise, although α and therewith αs may be quite substantial, while from Domar's thesis it follows that output capacity and possibly output continue to rise, because α and s remain positive magnitudes, though they may not increase and may even decline. If both theses were unequivocal, the economy would be forever under the threat of the output capacities outrunning income and total demand.

This fear has haunted Domar in his article on "The Problem of Capital Accumulation" in the December 1948 issue of this *Review*. In this article he poses two main questions, *viz.:* (a) Whether income can rise at the rate of αs, and (b) If it can, whether it will so rise.

He maintains that the failure so to rise would render capital accumulation excessive, deter further investment and thereby cause unemployment. Domar is in doubt whether income can rise at the rate of

* The author is economist of Union Corporation Ltd., London, England.

[1] "Capital Expansion, Rate of Growth and Employment," *Econometrica*, Vol. 14, No. 2 (Apr., 1946), pp. 137-47. "Expansion and Employment," *Am. Econ. Rev.*, Vol. XXXVII, No. 1 (Mar., 1947), pp. 34-35.

as, is therefore pessimistic as to the maintenance of full employment, but confesses that he can give no clear answer. He raises the question, but hardly examines it. However, in order to be able of applying himself to the second question, whether income will rise at the rate of s, he assumes for the sake of argument that question (a) were answered in the affirmative. His article centres therefore in his second question, whether income *will* rise at the rate of as. Once more, Domar evades the answer. In fact, he hardly examines even this question. He only indicates that his reply is probably negative by stating that "existing institutional conditions" do not allow the volume of investment that is needed to keep pace with an output growing at the same rate of as. He does not define these "existing institutional conditions." Instead, he puts forward a suggestion which falls into the realm of economic policy. He suggests that the supposed investment impeding influence of the "existing institutional conditions" could be overcome by the government guaranteeing that "for some time to come" income would grow at the as rate. The mere guarantee would induce entrepreneurs to undertake the required volume of investment so that income would actually grow at the required rate of as and the guarantee need never be put to the test. So far Evsey Domar.[2]

It will be the burden of this article to show that the problem of excessive accumulation of capital is quite different from that envisaged by Domar and that the reasons for the instabilities of income and of demand and employment and the magnitudes of the instabilities cannot be found in the fields where Domar searched for them; they may well be found in other fields. The useful conception of as as the rate of growth of output is not abandoned, but it will be given a wider interpretation.

It would be easy to refute Domar by taking advantage of his many assumptions as to the nature of the economy. Throughout his article he uses output and income as synonymous and also investment and saving. This is of course the proper assumption if one looks back on the preceding period. In retrospect, output and income or net investment and net saving are synonymous and equal. Therefore, in retrospect the rate of growth of income is equal to the rate of growth of output, both being as. The equalisation may have been brought about by various means, one of which may be the writing down of not fully employed capital equipment, which reduces both the magnitude of a, the latter being conceived as net after depreciation of all capital stock, and the magnitude of s, which is affected by any under-employment. Taking

[2] In the concluding section of his article and in an appendix Domar takes issue with Paul Sweezy on the latter's theory of underconsumption. This controversy does not directly concern Domar's argument that capital accumulation will become excessive if income grows at a smaller rate than the capital stock. This writer will therefore take no part in it.

advantage of those assumptions of Domar's one could easily prove that income always grows at the rate of αs and that both his questions are answered in the affirmative. In conditions as described by Domar, the problem of excessive capital accumulation would never arise.

The cold fact, however, remains that at times certain parts of output cannot be sold at the traditional or otherwise anticipated profits, or are assumed to become unsalable at those profits or any profits at all and that, in consequence, investments hitherto undertaken to cater for more of such output will no longer be undertaken. As a further consequence, the total of the annual investment no longer grows at the previous rate. $\Delta I = Y\Delta\alpha$ may become zero or even negative. In that case income (Y) being $KY\Delta\alpha$ would stagnate or even decline, whatever the magnitudes of K and Y, which by definition are positive. In that case there is a danger that output in terms of traditional prices and costs, unchanged in its composition and still rising at the rate of αs would tend even more to exceed the demand for it as money income tends to remain stagnant or even to decline. The equalisation of output and income will be enforced by the process of part of the output not being realised at the anticipated prices. This reduces the opportunities for certain types of investment, ***but not for all investments.***

It is obvious that such a forceful downward adjustment need not occur, if two changes were made, *viz.:*

1. If the composition of output—in terms of money—were changed.
2. If the composition of αs—in terms of money—were changed, and changed in a manner that the product αs would decline although the factor α would increase, enabling $\Delta\alpha$ to remain positive and allowing income (Y) being $KY\Delta\alpha$ to continue to rise.

Domar has barred his way to examining these possibilities by a few more propositions in his paper, which are most unreal. These propositions are: (a) take no account of relative price changes;[3] (b) regard α as constant;[4] (c) regard s as constant.[5]

[3] "Nothing was said about the possible effects of relative price changes (or other factors) on the magnitudes of s and α" (*op. cit.*, p. 781). Not only were these effects on α and s excluded from the examination of the problem, but no effects of price changes were considered at all throughout the paper.

[4] This proposition is stated in a somewhat ambiguous way. At first, it is put as "Its refusal (*i.e.*, the refusal of α) to adjust itself to changes in the volume of investment, so as to assure continuous employment" (p. 779). All I can read into this statement is that α, on this occasion conceived as the money savings rate, *i.e.*, the unspent money income as a ratio to the money income received, that this kind of α may change but at a lower speed than the investment rate, the latter being the ratio of net new capital goods to net output. In other words, it suggests that the money savings rate is relatively constant as compared with the more volatile investment rate. This would be in contradiction to the use of α as synonymous with the investment rate.

Ambiguous as this passage is, it is later followed by an additional assumption that α is in fact fairly constant at 10-12 per cent of money income and of output and this magnitude is made the basis of further conclusions.

These propositions are the crux of the problem. Domar came close to realising it when, as quoted in footnotes below, he explained that "if s can be anything, our argument falls through." This would have been an opportunity to investigate whether s is changeable, and if it were found changeable, to give up the argument. If constancy in all three fields, *i.e.*, of price relations, of the investment rate and of the marginal capital productivity rate, is assumed, then indeed capital accumulation is bound to be excessive before long. However, what grounds have we in a "private capitalist economy in which the government plays a minor part"—another of Domar's propositions—to assume constancy in those three respects? Let us examine the facts. Right from the beginning we will state that "inertia" is a powerful factor in every society whether the latter is of the "private capitalistic" type or of the government directed type. It is an attribute of all human societies. Consequently, changeability and adjustability are impeded in every society. As a matter of fact, the case for government direction or government intervention is based on the supposed ability of government to either provide adjustability or to compensate for lack of sufficient adjustability.

Having admitted the power of inertia in society whatever the latter's organisation, we can proceed to examining whether and in which way changeability of the three factors enumerated above would effect the problem of capital accumulation becoming excessive.

II

The proposition to disregard changes of relative prices is in contrast with the fact that they are of the very essence of economic life, indeed some of its purpose. Whether we think in terms of money output, money income and investment values, or in terms of "real" output, "real" income and "real" investment, the uneven rates of growth of output of the manifold individual commodities and services lead of necessity to an uneven development of marginal values of each one of them in relation to all the rest. It would be a strange accident, never observed and not to be expected, if all the demand and supply schedules of every commodity and service had identical shapes. As they have not, man tries by his work and by his saving to increase the output of those whose marginal value is high, in preference to those whose marginal value is low. Capital accumulation becomes excessive not because income falls short of output—which is a contradiction—but because the

[3] This proposition is clearly stated on page 779. "The assumption of a stable s is necessary." A few lines previously it was stated as follows: "While strictly speaking, we shall treat s as a given constant, it need not be so. It is certainly not the same among various firms and industries. The national average (if such exists) can be made a function of time, interest rate, or of something else. But it must have some stability, because if s can be anything, our argument falls through and we are back at the Knight-Simons proposition."

accumulating capital is of a kind that the output it produces is, or threatens to be, of declining marginal value. That decline may be due to the shape of the demand schedules of the goods produced or to the shape of the supply schedules of the factors of production. Lest it be forgotten—as Domar forgot—when speaking of capital accumulation becoming excessive, we are dealing with values (measured in whatever money is used) and not with volumes of equipment. If it could be arranged that a falling demand schedule would be matched by correspondingly changing supply schedules of the factors of production or, in other words, if falling prices such as are necessary to meet a demand in the course of saturation were matched by reduced costs which in themselves do not reduce demand, in that case capital of a particular kind could continue to accumulate, without becoming excessive. It is never the case that all and every kind of capital becomes excessive, but only a particular kind of capital or groups of particular kinds. All this is old stuff, but wants re-stating. Lack of price and cost flexibility is at the root of capital accumulation becoming excessive. The decline of income (and employment) is not caused by total income falling behind output or even behind output capacity, but by the fact that the change in the composition of both output and income falls behind the changes in the supply and demand schedules that go hand in hand with rising output and output capacity.

The dependence of the excessiveness of capital accumulation on the changeability of prices, costs and profits may also be demonstrated as follows: Output increasing at the rate of αs and realised at stable prices might well produce increasing and not stable profits and therefore investment opportunities in excess of those leading to a rate of growth of αs. Contrariwise, an increasing output sold at falling prices may still enable the existing profits to be maintained and prevent capital accumulation from becoming excessive. Whether it does so or not, depends on changes of various supply factors, one of which is the change in the rate of interest.

III

Domar's other unreal proposition is to take α and s as constant. While in regard to price flexibility we only re-stated what has been known, though apt to be ignored in recent years, in regard to the assumed constancy of α and s, we may have to put forward some new aspects. If they are not wholly new—as is probably nothing in economic theory—they may bring to light again features which have been neglected. Domar was led to the proposition of α and s being constant, apparently by the following reasoning: If employment is to be maintained, income must rise at a steady rate and that rate must be equal

to as. Consequently, as must be constant. Note that only the product as, and not each factor, would need to be constant. However, in order to save his argument, Domar assumed s to be constant. It had to follow that α would need to be constant too.

Such tests as have been made so far, indicate that s oscillates round a fairly stable average.[6] It is certainly not constant in the short run. Nor is α constant, whether in the long or in the short run. The very fact that the marginal propensity to consume most probably differs from the average propensity to consume and consequently the marginal propensity to save differs from the average propensity to save, would produce changes in α. Moreover, as may be stated here, though explained later on, the marginal propensity to consume and, therefore, the marginal propensity to save are themselves not constant. There is no reason, on theoretical grounds, why the difference of the marginal rates from the average rates and the changes of the former should combine to make the average rates constant, and there is no evidence that they do, but all the evidence that in retrospect they have not.

Though there is no ground to assume that either α or s are constant, it is still thinkable that their product as might be constant. It is now time to point to a new, and in this writer's opinion, important aspect. The factors α and s are not independent magnitudes. More exactly, s and I, the investment underlying α and s, are interdependent. Nor is K independent of ΔI in the Keynesian formula $K\Delta I = \Delta Y$. The fact is that ***investment*** (I) ***has both quantity and quality, the latter changing with the composition of*** I. The productivity rate s, however, is a function of the quality, ***i.e.***, of the composition of investment. More pronouncedly, the marginal productivity rate is a function of the quality of the marginal investment. Likewise, the composition of the marginal investment (ΔI) will affect the marginal propensity to consume and, therefore, the multiplier K in the Keynesian formula. A change in s following a change in the composition of investment will of course change the rate of growth of output, or at least of potential output. If before this change of composition, output of capital goods tended to outpace the demand for them at the prevailing prices and other conditions and, because of the relative rigidity of prices and other conditions, tended to produce the dreaded dearth of investment opportunities, a change in the composition of investments may immediately slow down the rate of growth of potential output without reducing the volume (at prevailing prices) of investment and saving. It can produce this effect, even while the volume of investment (at prevailing prices) increases. One well-known instance of such a change in composition is the sub-

[6] See this writer's article on "Capital Requirements in Progressive Economies" in *Economica*, N.S. Vol. XII, No. 47 (Aug., 1945), pp. 163-71.

stitution in the annual investment, of residential buildings for highly efficient machine tools. As much labour and capital resources may be spent on the former as on the latter, but the immediate annual output (value added after raw materials and wages, before depreciation) or potential output resulting from the installation of machine tools may be 100 per cent of the cost of investment, while that resulting from the erection of residential buildings may be 10 per cent. If it is objected that because of the different rates of depreciation, the productivity rates net of depreciation of the two types are nearly equal and the factor s is conceived as "net of depreciation," therefore, hardly changed, I would reply as follows:

It is correct that entrepreneurs when making their investment take account of anticipated profits, net of depreciation, otherwise they would not substitute long-life for short-life investments and that income is also distributed net of depreciation provision; however, it is also correct that the output that is offered for sale is increased by the gross output during the life of the equipment that produces it.[7] Let us put it into figures.

If in one period the marginal productivity rate (s) (gross before depreciation) were 0.33 and s (net of depreciation provision) 0.3 and if α (net) were 0.1 of output, the rate of growth of output would be 3 per cent p.a. This assumes that as much replacement expenditure is made as is provided for as depreciation. If the whole of α (net) were invested in machine tools and because of their high gross reproduction rate, the marginal productivity rate (s) were raised to 1.0, while actual replacement expenditure of the total capital stock remained almost unchanged, annual output during the life of these machine tools would increase by close on 1.0 times 0.1, or by close on 10 per cent. If the whole of α (net) were invested in houses and because of their low gross reproduction rate, the marginal productivity rate (s) were reduced to 0.1 gross while replacement expenditure of the total capital stock remained almost unchanged, annual output during the life of these houses would increase by somewhat less than 0.1 times 0.1, or by close on 1 per cent. Another illustration might envisage a situation in which all output not consumed, but available for investment, which may be 20 per cent of output, would be expended on weapons and military stockpiling. This expenditure of resources has a gross productivity rate of zero, if we overlook as is usual the intangible value of future external security. As the replacement expenditure of all the other capital stock continues, say at the rate of 0.1 annual output, net s becomes -0.1 and αs becomes negative. This is as might be expected, if a country devotes —as it might be forced by circumstances—all its output (gross before depreciation) to consumption or other "non-productive" expenditure.

[7] This discrepancy has already been observed by Keynes (*General Theory*, Chap. 8, IV).

In actual life we observe any combination of investment of varying shades of gross productivity from very high to zero and frequent changes of this combination.

The manner in which change in the quality, *i.e.*, in the composition of investment affects the multiplier K in the Keynesian formula can be illustrated as follows: Assume the total annual net investment (I) to consist of residential buildings only. In that case the goods and services made available for consumption and actual consumption of them would increase more than if net investment consisted of factories producing machine tools. This would be so irrespective of the previous consumption habits of the population. The increase in the consumption may be so great as to be nearly equal the increase of total annual net investment. In that case K (being $[\Delta C + \Delta I]/\Delta I$) would be very large but in the following period ΔI would be very small. Whether or not the interdependent changes of K and ΔI are of a magnitude, as not to affect the product $K\Delta I = \Delta Y$ need not be considered here. It is possible that it would affect that product and that consequently the ratio $K\Delta I/Y$, which is the rate of growth of income, would be affected too by the change in the composition of income.

It is apparent that a change in the composition of investment without any change in the value (at stable prices) of the aggregate, that is, in the (weighted) volume, of investment would produce divergencies from the prevailing degree of balance, as follows:

1. It would change the rate of growth of output that is available for sale, by changing the gross marginal productivity rate.
2. It would change the ratio which the annual income realised or assumed to be realisable (including annual corporate savings) bears to the annual output for sale, because the former is net of depreciation provision for the new investment, while the latter is gross of it. Such a change can be of considerable importance on short term fluctuations of employment.
3. It would change the impetus to increasing the income, inasmuch as it changes the multiplier and marginal net investment and possibly the product ($K\Delta I$) of these two factors.

In this writer's view the discussions of recent years stimulated by Keynesian and Marxian systems of thought have been too much occupied with the size of the investment and have overlooked the change in the composition of investment. Other schools of economic thought have, however, been well aware of the importance of a change in the composition of investment.

So far in this section it has been tacitly assumed that prices are stable and that productivity rates and investment rates are changed by the changes in the physical composition of investment and consequent technical factors. However, such changes also affect the marginal values of

the components of output, income, capital stock, consumption and saving all as expressed in money. This is another reason why the assumption of constant a and constant s is unreal. There are no grounds known yet why the effect on marginal values, and therefore on prices, cost and profits should lead to constancy of the money values of as or of $K\Delta I/Y$.

In summary, the composition of investment as expressed in money is of the utmost importance from the point of view of its effects on the productivity rate (s) or on the multiplier (K) as well as from the point of view of its effect on relative price changes. There is interdependence not only between the subjects treated in this Section III, but also between these subjects and the subject treated in Section II. The problem of capital accumulation becoming excessive is inseparable from the problem of changeability of relative prices and of the changeability of a and s.

IV

It follows that Domar's remedy of "somehow" inducing people to continue investing—irrespective of the kind of investment—cannot assure a permanent equilibrium of output and demand. Of course, it may postpone for a while the unmasking of a disequilibrium. By so doing, it may even assist in making the disequilibrium more severe. As a matter of fact, compensating expenditure by government—although in recent years dressed up as a mere increase of spending—has always effected a change in the composition of expenditure and investment. Its value as a remedy, such as it is, is largely derived from the effect of it being a means of changing those compositions.

The question is apposite whether, and if so, to what degree unemployment is an appropriate means or even a justifiable accompaniment of effecting the necessary changes in prices, costs and the composition of output and income. Our generation has come to the conclusion that it is not the former and is doubtful whether it is the latter. We are still searching for more appropriate and justifiable ways. We should be honest and declare that we have not yet found justifiable means of effecting those changes that would not be accompanied by unemployment. The Keynesian thesis demanding a continuous increase of investment irrespective of its composition does not provide such means. Nor does *laissez faire* in a society in which the power of inertia is so strong as it is in all contemporary societies. Nor does the Russian system, in as much as we know its working, demanding as its price, *inter alia*, forced labour on a very substantial scale and many other compulsions. This writer has no solution to offer either at this juncture, the present article being only concerned with the analysis of the case. It may be that by experiment with various forms of interventions we may stumble

into a solution. While those government interventions may aim at increasing expenditure or in the case of taxation and licensing of investment at reducing it, they may result in changing the composition of output and demand. The nations of the so-called Western World have only started to experiment. It is too early to evaluate the efficacy of the various doses of intervention. In the meantime, let us be clear in the recognition that capital accumulation becomes excessive and investment declines not because our society allows income to fall behind the required rate of αs, but because the power of inertia in our society makes the changeability of the factors of output and expenditure fall behind the required changes in their composition.

The search for means of changing relative prices and the composition of investment without incurring unemployment is in no way furthered by an assumption that unemployment is solely a function of an insufficient rate of growth in the size of income. This assumption is implicit in Domar's article.[8]

This certainly endows the rate of growth of income with undue importance. Unemployment arises if and when the supply and demand of employment do not balance. The growth of income is a determinant of the supply. The demand is a function of several other variables. Some of the latter are quite independent of the growth of income. For instance, the rate of growth in the number of employables—an important variable of demand—is mainly determined by past birth rates and recent death rates, and to a lesser extent by rates of migration, and bears very little relation to the present growth of income. Another variable is the rate of change in the quality of the employables (skill, training, general education) as different from their numbers. Even this variable may be independent of, or only partly dependent on, present income. Other determinants may be less independent of the growth of income, but their rates of change are most probably very different from the rate of growth of income. Among those other variables, there will be found the working time per year per employable offered, the response of labour within the working time to the output opportunities offered, that is the labour productivity rate, as it were, and last but not least the rate of growth of annual income per employable that is demanded along with the number of jobs. As far as I am aware, economists have hardly ventured into the territory of the rates of growth of income from employment per employable that is demanded together with a rising

[8] In his previous papers, as quoted in the first page of this note, it was expressed as follows: "employment is a function of the ratio of national income to productive capacity" the latter explained as "total output when all productive factors are fully employed" ("Capital Expansion" etc., *op. cit.*, pages 139 and 137). Also *ibid.*, page 143, "The failure of the economy to grow at the required rate creates unused capacity and unemployment."

quantity of employment. That rate of growth of income demanded from employment is, however, another determinant of the required rate of growth of income. The rate αs is not the only one.

Conclusions

The αs conception, as formulated by Evsey Domar, was a progress in that it showed that expansion at the rate of $\Delta\alpha$ multiplied by a stable factor K, the Keynesian proposition, cannot assure equilibrium. It redirected attention to the dynamic elements in our economy. Its application to determine excessive capital accumulation and unemployment is however faulty. *In my view, studies in the effect of changes of the marginal capital productivity rate that are produced by changes in the composition of investment, and of course, in the mechanism which produces or permits the latter changes, are a preliminary to studies into the balance between output and demand (income).* Without more knowledge about those effects, the question of how to avoid capital accumulation becoming excessive cannot be answered. Nor can the question of how changes in capital accumulation affect employment be answered without more knowledge of the determinants of the demand for employment.

Rejoinder

If my understanding is correct, these are the main points of Mr. Stern's note: (1) That no definite statement was made in my paper as to whether or not real income can or will grow at a certain rate. (2) That the concepts of saving, investment and income were used improperly. (3) That no account was taken of relative price changes. (4) That both α and s were incorrectly assumed to be constant.

In addition, Mr. Stern made several other suggestions which do not directly bear on my paper and therefore do not require an answer.

1. Mr. Stern is correct in asserting that no definite statement regarding the ability of real income to grow at the so-called required rate was made in my paper. The reason for this omission was, however, explained—the unavailability (to my knowledge) of the necessary empirical information. If Mr. Stern possesses it, we should all regret that he did not choose to enlighten us. In the apparent absence of such data, those who retain their interest in the subject may still continue—and I hope not without profit—to analyse the problem. Such a procedure is hardly an "evasion." If I were pressed for an answer, I would say that, as far as I can now tell, our past (and probably future) difficulties were not caused by the *inability* of income to grow at some required rate. In other words, physical limitations (of which labor shortage would be the most important one) were not the cause of our down-

swings, and the trouble lay in our institutional setup, or more specifically, in the manner in which investment decisions in our economy are made. I agree that this statement does not go very far; any attempts to develop a deeper and better explanation are welcome.

2. It is to the credit of the last war that it put an end (or at least I hope it did) to the useless debate about the proper definition of income, saving and investment. That so much time and space could have been devoted to such a sterile subject, certainly does not enhance the prestige of our profession. If Mr. Stern is still worried, he might reflect on the rôle played by changes in inventories in equating saving with investment. It is perfectly true that by defining income α and s in a certain manner, Mr. Stern could make income always grow at the required rate, just as by an appropriate definition of a full employment equilibrium, the economy could be said to remain perpetually in this happy state. But the usefulness of these demonstrations, except as intellectual exercises, is not immediately clear.

3. I readily agree with Mr. Stern that relative price changes perform important functions in this, as in most other economic problems, but I refuse to jump with him to the conclusion that given flexible prices, the problem of capital accumulation, and by implication—of employment—ceases to exist. Mr. Stern is free to construct any number of theoretical models in which behavior patterns are such that flexible prices do assure a state of continuous full employment. This pastime has attracted economists for many years. The discussions of the last two decades have shown that the whole question is more complex than that, and that flexible prices are a remedy which may either cure or intensify the disease.[9] Mr. Stern certainly confuses the issue when he argues that "It is never the case that all and every kind of capital becomes excessive, but only a particular kind of capital or groups of particular kinds" (Sec. II). In a changing society, some kinds of capital become excessive all the time, and not much can or need be done about it. But such partial maladjustments are not likely to cause depressions; by their very nature, these kinds of excessive accumulations of capital in some industries imply corresponding shortages in others. And Mr. Stern will be hard put to find capital shortages corresponding to the piles of unused capital in this country during the 'thirties.

4. And now, about the constancy of α and s. What Mr. Stern fails to realize is that this assumption has only a logical significance: it facilitates the mathematics involved. The real issue is not the constancy of α and s—and there is no reason why they should necessarily be con-

[9] See in particular Oscar Lange, *Price Flexibility and Employment* (Bloomington, 1944), and Don Patinkin, "Price Flexibility and Full Employment," *Am. Econ. Rev.*, Vol. XXXVIII, No. 4 (Sept., 1948), pp. 543-64.

stant—but whether or not they so adjust themselves to economic changes as to bring about a reasonably continuous state of full employment. If, for instance, the propensity to save falls whenever investment does, so that income is unimpaired, the whole problem of capital accumulation loses its significance as far as employment is concerned. But such an obliging behavior of α has not been witnessed in the past, and Mr. Stern has not convinced me that it will necessarily take place in the future.

As far as s is concerned, we are all aware that it differs among the various industries. There are industries with a low s, such as housing, railroads, hydroelectric installations, and evidently atomic energy plants, just as there are those with a high one, such as services. On the whole, high wages and low interest rates should encourage the former, but the question still remains whether these industries, requiring large capital outlay per unit of output and therefore frequently involving a high degree of risk, are best suited for private enterprise.

These, I believe, are the main issues which Mr. Stern's note has raised, and we may spare the reader's time by foregoing the argument about the minor ones. The problem under discussion—and probably any problem—transcends in importance what one or another individual said or meant to say. In this spirit, Mr. Stern's note should certainly be welcome.

Evsey D. Domar

The Johns Hopkins University

THE FEDERAL RESERVE AND MONETARY POLICY FORMATION

By George L. Bach*

The problem of establishing more effective arrangements for the formation and execution of federal economic policy has been the subject of lively discussion since presentation of the Hoover Commission reports to Congress. In the monetary field this stimulus has been augmented recently by repeated demands for a new National Monetary Commission to study the entire problem of our monetary and banking arrangements. It is the purpose of this paper to summarize a recent study made for the Hoover Commission of the actual procedures followed in modern American monetary policy-making (primarily by the Federal Reserve and the Treasury), to point out certain weaknesses which seem to be evidenced, and to suggest some considerations that appear to be important in devising more effective procedures for formulating and executing sound monetary policy. Certainly no administrative arrangement can guarantee good monetary policy, but some arrangements may be more promising than others.[1]

I. *The Setting for Monetary Policy Formation*

Congress's directive to the Hoover Commission was essentially to examine the executive branch of the federal government with a view to recommending ways to make it more efficient in carrying out its func-

* The author is professor of economics at Carnegie Institute of Technology. This paper represents primarily a brief summary of one part of a larger study of the Federal Reserve System done by him in 1948 for the Commission on Organization of the Executive Branch of the Government (the "Hoover Commission"). The recommendations suggested in the concluding section are for the most part those presented by the Commission's Task Force on Independent Regulatory Commissions. The Commission itself adopted the first recommendation listed below (for a "National Monetary Council"), but neither endorsed nor rejected the remaining Task Force recommendations, forwarding the Task Force and supporting staff reports to Congress without other comment on the monetary policy area.

The views expressed herein are personal, and are not necessarily those of the Commission or its Task Force. The recommendations of the Commission's Task Force on the Federal Reserve System are summarized in Appendix N of the Commission's reports. The detailed analysis of the Federal Reserve System's policy-making activities is contained in a staff report under that name.

[1] Roughly, monetary policy is taken here to cover those actions by the federal authorities concerned which importantly affect the supply of, or demand for, liquid assets (currency, deposits, and government securities) by the non-banking public.

tions. But the efficiency of any policy-forming agency can be analyzed only in the light of goals or ends which the policies are supposed to help achieve. Does the agency make good policy is the basic question if the major function is to make policy.

In the case of the Federal Reserve, which is ordinarily considered the agency primarily responsible for monetary policy-making, the question of what kind of policy it should make is far from simple. The Federal Reserve Act provides amazingly little information on what the System's monetary (credit policy) duties are, though it contains vast detail on the service functions of the Federal Reserve (currency issue, check clearance, etc.).[2] Both the language of the act and its legislative history indicate that credit control (monetary policy) was conceived of as involving primarily due attention to the gold standard, plus maintenance of "sound" individual banking practices. Though the Banking Acts of 1933 and 1935 clearly envisaged an important rôle for Federal Reserve monetary (credit) policy, even they provided no mandate as to what specific objectives monetary policy should seek to achieve, outside of the original preamble and sprinkled admonitions against undue use of "speculative" credit. Directives to help achieve full employment, prevent inflations, or mitigate business fluctuations are conspicuously lacking. The exception is the Employment Act of 1946, which is of somewhat indirect and uncertain applicability to the quasi-independent Federal Reserve, at least in the eyes of many observers.

In the absence of specific Congressional directives, it is necessary to posit standards against which present policy-making procedures can be judged. Limiting consideration to what is ordinarily termed credit, or monetary, policy, today the job of the Federal Reserve might reasonably be said to be: To regulate the cost and availability of money, both in the aggregate and in segments, so as to make a maximum contribution to high-level economic stability (roughly, full employment without inflation). This statement is in keeping with official Federal Reserve and orthodox economic pronouncements, although to mesh with the definition of monetary policy given above, "liquid assets" should be substituted for "money."

The current setting for monetary policy formation is so well known that detailed repetition would be pointless. In essence, traditional Federal Reserve control mechanisms (reserve requirements, open-market operations, rediscount rates) have become largely useless against inflation because a huge volume of government securities is outstanding in

[2] The preamble states the purpose of the Act as: "To provide for the establishment of Federal Reserve Banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish more effective supervision of banking in the United States, and for other purposes."

the hands of the commercial banks and the non-banking public, and because both Federal Reserve and Treasury authorities are committed (at least temporarily) to maintaining a low rate on long securities. Practically, this involves Federal Reserve support of the whole rate structure in governments when necessary, and in effect guarantees monetization of outstanding governments at the option of the banks and the public. But the support price itself is not the only issue. Even if interest rates were to rise, there would remain the war period heritage of a swollen liquid asset supply (currency, deposits, and government securities) in the hands of the public which would seriously hinder restrictive attempts by monetary and fiscal authorities.

In the broad sense, "monetary" and "debt" policy must be considered inseparable, if the importance of the public's *total* position on liquid assets (at least money plus government securities) is recognized, in contrast to the traditional concern with the supply of money alone. Not only may changes in the total volume of liquid assets influence investment and consumption spending directly, but indirectly as well through interest rates and credit rationing. Shifts in the holding of governments between banks and the public and changes in the structure of the debt outstanding may have similar effects. Debt management for years to come will almost inevitably play a major monetary policy rôle, regardless of the exact interest policy followed. Moreover, fiscal policy, like debt policy, inevitably has monetary effects, and effective fiscal policy increasingly appears to require appropriate changes in the supply and composition of liquid assets.

Given the fundamental decision to maintain long-term governments around par, the real issues on credit policy in the postwar period have thus centered around the prices at which the Federal Reserve stands ready to buy government securities offered directly or in the open market, and around the interest rates at which the Treasury refunds the maturing issues in the public debt. In fact, the two decisions have been inseparable. The Federal Reserve has changed its open-market policy (its pattern of buying prices for governments) only after full consultation with the Treasury; and changes in Federal Reserve buying prices on governments have been closely coordinated with changes in the interest rates offered by the Treasury on refunding issues. The determination of open-market policy has thus been essentially a determination, in effect jointly with the Treasury, as to the structure of interest yields on government securities. Given the decision to maintain low interest rates, Federal Reserve policy on reserve requirements and rediscount rates is of second-order importance for over-all monetary purposes, though it may importantly affect bank earnings and particular groups of borrowers and asset-holders. War finance has set a con-

fining stage for current monetary-fiscal policy-making, whatever administrative arrangements prevail, unless we are prepared to make rather drastic shifts in our debt structure or credit policy commitments.

II. *The Process of Monetary Policy Formation*

The legal structure of Federal Reserve policy-making machinery, encompassing primarily the Board of Governors and the Open Market Committee with basic responsibility in the former for major credit policies except for open-market operations, is well known to economists. As indicated above, continuation of anything like present debt and monetary arrangements promises to center emphasis on joint Federal Reserve-Treasury determination of the government security rate structure. In terms of Federal Reserve policy, open-market operations are the major focus.

Actual Federal Reserve policy-making reflects the facts of monetary interdependence. In practice, the separations between open-market and other credit policy-making is less sharp than would appear from the statute. The Board members constitute a majority of the Open Market Committee. Possibilities of changing reserve requirements are inevitably considered in Open Market Committee discussions, as an alternative or supplement to open-market operations. With seven identical members of both groups and close informal relations between the Board members and Bank presidents, the decisions in the two areas are on the whole closely integrated. The Reserve Bank presidents generally have a full opportunity to present their views on reserve policy; since voting control on all policy issues ultimately resides in the Board and since leadership of the Board chairman for over a decade has been strong on all major policy issues, the relative rôles of the Board and the Banks have not been greatly different for open-market, discount, and reserve requirement policy. In all, Reserve Bank influence is relatively informal, exercised through discussion and correspondence with the Board members more than through formal voting strength.

The Open Market Committee meets quarterly. On the day preceding each meeting, the twelve Reserve Bank presidents customarily meet in Washington to discuss common Reserve Bank problems and to consider developments in the credit policy area. While little concrete evidence is available, it appears that there has sometimes been a tendency for the presidents to consider themselves as something of a "bloc" during periods of controversy with the Board over open-market and reserve policy, though this has not been uniformly true and there is often disagreement among the Reserve Bank presidents. The presidents, often led by the president of the New York Bank, have often been

more inclined to favor cautious, mild policies that would be less disturbing to the normal courses of banking and the money markets than have the Board members.[3]

Open Market Committee meetings are informal. Discussion typically ranges freely over the entire field of credit policy. Those Reserve Bank presidents who are not at the time members of the Committee also almost invariably attend and participate as freely in the discussions as do the Committee members. This means, in effect, that meetings of the Committee consist of a minimum of 25 to 30 persons (seven Board members, twelve presidents, and ten or so staff members from the Board and Banks), the majority of whom feel free to participate actively in discussion. A group of this size, even though only twelve are voting members, has not been found a highly effective deliberative or executive body. It functions in considerable part as a medium for general discussion and examination of issues.[4]

Under the circumstances, much of the rôle of open-market policy-making is in effect delegated to in Executive Committee, operating under general directives from the full Committee. The Executive Committee consists of three Board members and two Reserve Bank presi-

[3] This was apparently true, for example, at various points during the war when the possibility of raising reserve requirements was considered; following the war when Board proposals to tighten up sharply on interest rates were under discussion; and when the Board recently proposed that additional special statutory reserve requirements (fulfillable by holding government securities) be imposed on member banks to check loan expansion. On highly technical questions such as these, where no definitive criteria for action are available, it is only natural that the Reserve Bank presidents, whose daily work throws them in intimate contact with the commercial banks of their districts, should sense and appreciate fully the problems faced by the bankers. The Board members, on the other hand, are further removed from the private banking community and are apt to evaluate higher the possible "public" advantage (for instance, checking inflation) even at the cost of reducing private bank earnings or disrupting normal money market procedures. An example is the contrast between the Board of Governors' views on postwar anti-inflation policy as presented by chairman Eccles, and those presented by president Sproul of the New York Reserve Bank, before the joint Congressional Committee on the Economic Report in 1947-48. The Board sought added reserve requirement powers to take active steps against inflation through checking bank credit expansion, while Mr. Sproul doubted the need for further action in the credit field and specifically opposed the vigorous, "clumsy" method of raising bank reserve requirements if any action were to be taken, favoring instead a more tentative, less "disruptive" approach. Chairman Eccles' testimony was given on November 27, 1947 (reprinted in the *Federal Reserve Bulletin,* December, 1947, pp. 1455-63) and on April 13, 1948; President Sproul's testimony was on May 12, 1948.

[4] When the vote is taken on a policy directive to the Executive Committee, it is usually unanimous. The last divided vote on a formal directive to the Executive Committee occurred in 1943. Unanimous votes were common during the earlier history of the Committee, though less uniformly so. This ordinarily represents a compromise to which unanimous agreement can be obtained, though in some cases there are no substantial disagreements to be compromised and the leadership of the chairman in establishing his views has been very strong. It is apparently felt that a unanimous vote is desirable, possibly to present a united front against possible policy criticism from outside the system.

dents, with the Board chairman as chairman and the president of the New York Bank as vice chairman. Day-to-day market operations are carried on by the manager of the System Open Market Account, acting in close consultation with the two leaders of the Executive Committee and with the Treasury. The account manager, who is also a vice president of the New York Reserve Bank, plays a rôle involving substantial discretion and money market prestige in carrying on the account's day-to-day dealings. Under the recently adopted policy dropping a fixed pattern of rates, the account manager must in essence "make" day-to-day System open-market policy within an appreciable range of operating discretion.

During and since the war, the most crucial part of Committee policy formation has occurred through the discussions between its representatives and the top officials of the Treasury. All major decisions as to the government security market rate structure are considered in these conferences. Such policy discussions, covering the entire range of financing and credit policy, have been long and time-consuming. Their size and formality vary. Recently, the Board chairman and New York Reserve Bank president (chairman and vice chairman of the Open Market Committee) have frequently met informally with the Secretary and Undersecretary of the Treasury. Often a few senior staff members from both agencies are included, since relatively technical details are of major importance in many financing decisions. Sometimes joint Federal Reserve-Treasury staff working parties develop agreed staff recommendations, but this is rare. More commonly, each agency has developed its own program, based on separate consultations with the banking community, which it proposes for discussion, and the Board chairman and the New York Bank president have also not infrequently taken divergent positions, especially on minor financing matters.[5]

Out of these negotiations finally comes an agreed program, or at least an operational basis for non-conflicting policies. On Treasury financing the final decisions are made by the Secretary of the Treasury, who may give more or less weight to Federal Reserve counsel. On credit policy the final decisions are made by the Reserve authorities, but over the past decade they have almost never diverged sharply from

[5] Between policy meetings, the Board's staff is in frequent touch with its Treasury counterpart and with the New York Reserve Bank on day-to-day market developments. Equally close operating relations prevail between the Treasury Under-Secretary or Assistant Secretary in charge of fiscal operations and the manager of the system open market account at the New York Bank. The account manager is also viewed by the Treasury as its main point of contact with the money market, since the New York Bank acts as chief fiscal agent for the Treasury as well as for the Open Market Committee; and the Treasury guards carefully from Board interference its direct relations with the New York Bank on fiscal agency money market affairs.

the Treasury position on major policy. They feel freer to do so on non-open market policy decisions that do not directly affect the prices of government securities. In such informal negotiations, the personalities of the various top officials involved have influenced substantially the nature of the negotiations and the relative strength exerted by the two agencies.

The importance of these joint Federal Reserve-Treasury discussions and decisions inevitably concentrates a high degree of Federal Reserve leadership in the major conferees, the chairman of the Board and the New York Bank president. This leadership over the past decade has been greatly strengthened by the fact that both governor Marriner Eccles at the Board and presidents George Harrison and Allan Sproul in New York have been, it is generally recognized, "strong" men who have exercised System leadership on other policies as well. Governor Eccles in particular, during his chairmanship from 1934 to 1948, made the rôle of the chairman one of strong leadership for the System.[6]

Quite aside from personality factors, however, as the chief Federal Reserve representative in dealings with the Treasury, the chairman inevitably not only serves as primary Federal Reserve official in discussions so highly complex and fluid that simple, completely prearranged positions were seldom feasible. He also serves as the primary conduit to carry back to the Reserve authorities the complex attitudes of Treasury officials on the intricate problems of debt financing and interest rate policy. In the Treasury, responsibility on important issues is necessarily narrowed down to one man, the Secretary, or at least to two, the Secretary and Undersecretary. As a practical matter, in intricate decisions involving many mutually interrelated variables a Federal Reserve Open Market Committee of twelve members, or even a Board of seven, cannot actively and equally share in discussions and "bargaining" with a single-headed Treasury. The nature of modern central banking makes almost inevitable highly centered System leadership *if* the

[6] There is no case on record in the Board's formal reports during the entire fourteen years when a policy decision was taken against Governor Eccles' vote, and in the large majority of cases votes were unanimous. His leadership in the Open Market Committee appears to have been slightly less complete, but here again there is only one policy issue on record in his twelve years as chairman on which his vote was overridden (three identical votes on the handling of short-term issues in the system account in early 1939). His leadership in both the Board and the Open Market Committee was thus exercised predominantly through informal discussion with other members rather than through obtaining formal voting majorities on issues that came to final vote in a controversial state. This situation was apparently supported by the desire to take unanimous action on policy issues whenever this was feasible, and there was undoubtedly a substantial amount of internal cross-influence before many votes were taken, in which the president of the New York Bank in particular often exerted marked influence.

As this is written, chairman Thomas McCabe has served so briefly as chairman of the Board that there is no basis for generalization beyond chairman Eccles' regime.

System is in fact to have any real influence over the supply of liquid assets and the interest rate structure.

III. *Evaluation of Present Policy-Making Procedures*

Though the legal independence of the Board from the Treasury has been complete since 1935, when the Secretary of the Treasury and Comptroller of the Currency were removed from Board membership, if anything, credit policy since 1935 has been more rather than less consonant with Treasury financing needs. In fact, the Federal Reserve has been far from "independent." The pattern and volume of Treasury financing have provided the framework for credit policy-making. It is significant that Federal Reserve influence in the direction of stronger anti-inflationary measures during the early postwar period, while apparently of appreciable importance, was exercised primarily through influencing Treasury decisions on financing, and through repeated insistence to Congress and the public on the need for more positive action to stem the inflation—*not* through direct Federal Reserve actions. Fringe measures were taken—a small increase in short-term rates, consumer credit and stock market controls, and direct suasion to discourage inflationary lending—but the Reserve authorities' repeated requests for new type reserve powers reflected their basic unwillingness under the circumstances to use their one powerful weapon —withdrawal of market support for long-term government securities.[7]

The reasons for Federal Reserve adherence to Treasury leadership in spite of the complete statutory independence of the Board are no less real and understandable because they are largely intangible. At bottom they reduce to the facts that (a) the Board is, and feels itself to be, a part of the government, (b) within the government Treasury and Federal Reserve policy are so inextricable that sharp operating conflict between them would yield a government financially divided and vulnerable to crisis and instability, and (c) in the negotiation of conflicts of view into a more or less accepted operational program, the Treasury is almost invariably the stronger of the two, basically be-

[7] The Federal Reserve appears to have drifted into the low interest policy early in the war before tightening reserves, full employment, and inflationary pressures became a major problem. The gradualness of these developments provided no vivid issue on which the decision was sharply faced. By 1942-43, the Federal Reserve authorities were advocating stronger anti-inflation measures in Treasury-Federal Reserve councils, but by this time the pattern of war finance was firmly established and the Reserve officials were unwilling to take action counter to Treasury insistence on the easy-money pattern. In the postwar period, official Federal Reserve pronouncements have suggested a schizophrenic urge to rationalize low interest rates in inflation while insisting that all the logical concomitants of low interest rates must be avoided if disaster is to be prevented. *Cf.* L. V. Chandler, "Federal Reserve Policy and Federal Debt," *Am. Econ. Rev.*, Vol. XXXIX, No. 2 (March, 1949), pp. 405-29, for a more complete account.

cause of its closer ties with the President and his executive officials but also because of its own potential powers over bank reserves.[8]

Treasury rather than Federal Reserve leadership in the resolution of conflicting views apparently arises, anomalously, in substantial part from the very "independence" with which the Board is vested. The Treasury is a crucial operating branch of the government. It is charged directly with the responsibility for borrowing any funds needed by the government. It recommends the tax policy. In his fiscal and debt policy rôles, the Secretary of the Treasury is inevitably in close contact with the White House. At least during the past fifteen years, the Secretary of the Treasury has been one of the President's closest personal confidants and advisers. This relationship is probably not accidental; by the nature of his function the Secretary of the Treasury will always be more closely associated with the President than most of the other cabinet members.

Federal Reserve stress on its "independence" from the ordinary executive branch of the government has placed it in strong contrast to the close operating responsibility of the Treasury in executive affairs. While the Board is appointed by the President and the chairman apparently serves at his will,[9] Board relations with the President have, in accordance with the intent of the law and with practical operating responsibilities, always been much less close than those of the Treasury. The Secretary of the Treasury typically saw the President on virtually a day-to-day basis during the war. The Board chairman's visits were more on the order of one or two a year. Thus in the ultimate formation of major government financial policy, the Treasury has generally

[8] Traditionally, "independent" central banks have protested strongly against Treasury borrowing from the commercial banks and the central bank itself to finance war costs, but in practice they have almost never refused accommodations. The transition from private to at least semi-public status for central banks abroad has lessened the sharpness of this conflict, and with nationalization in many countries any conflict of views is entirely within the executive branch of the government. See the account of M. A. Kriz, "Central Banking and the State Today," *Am. Econ. Rev.*, Vol. XXXVIII, No. 4 (Sept., 1948), pp. 565-80.

In the peaceful, prosperous 1920's, however, according to C. O. Hardy, there was little evidence of Federal Reserve subservience to Treasury fiscal needs (*Credit Policies of the Federal Reserve System*, Brookings Institution, 1932, Chap. XIV). In view of the very limited Treasury fiscal needs of the times and the guiding role widely accorded the gold standard, the significance of that decade's experience for the future may be somewhat limited.

[9] The exact legal status of the President's power to remove the chairman (as chairman though not as a Board member) is not clear. In Humphrey's Executor v. United States (295 U.S. 602 [1935]), the Supreme Court held that Congress could restrain the President from removal of Federal Trade Commissioners except for causes specified in the statute. The Federal Reserve Act merely states that the chairman and vice chairman are to be designated by the President for four-year terms, and contains no specific restrictions on the President's power of removal during these terms.

been in the "inner council" while the Federal Reserve has been a much less active participant.

Federal Reserve-Treasury policy conflicts have seldom been taken to the President for resolution. This again has apparently reflected in part the Federal Reserve's unwillingness to consider itself similar to the regular departments in executive responsibility to the President, and in part recognition that the Federal Reserve was seldom likely to prevail under prevailing circumstances. During part of the war, however, the process of over-all government economic policy-making was transferred in considerable part to the Office of Economic Stabilization in the Executive Office of the President. Meetings of the Economic Stabilization Board[10] considered the relative rôles of fiscal policy, credit policy, direct controls, and other measures in the war period economic scene. Fairly few Federal Reserve-Treasury conflicts on credit policy appear to have been taken to the Board, but, in general, the voice of the Federal Reserve on general economic policy appears to have been greater during than before or since that period.

Aside from the question of ultimate presidential support, the Reserve authorities are always aware of the Treasury's own potential powers over bank reserves and the need for agreement if negation of each other's policies is to be avoided. Treasury powers to reduce member bank reserves are very great, simply through permitting Treasury balances at the Reserve Banks to pile up, through the handling of its trust funds, and through Stabilization Fund operations. While the Treasury's powers to augment bank reserves are more limited,[11] they are ordinarily large in view of the large cash balances now typically maintained by the Treasury. Treasury utilization of these powers specifically to influence bank reserves would generally interfere with the normal course of its fiscal or exchange operations, and credit policy implications of Treasury fiscal management operations have ordinarily been a secondary consideration. Nevertheless, the potential Treasury use of such powers is an additional consideration impelling Federal Reserve authorities to cooperate with the Treasury to reach working agreements on credit and fiscal policy.

Lastly, if the Federal Reserve should adopt policies in active conflict with those of the Treasury and the administration, the possibility always exists that Congress may alter or abolish the present system.

[10] Composed of the director of Economic Stabilization; Secretaries of the Treasury, Commerce, and Labor; chairman of the Board of Governors of the Federal Reserve System; Director of Budget; Price Administrator; chairman of the National War Labor Board; and two representatives each of labor, management and agriculture appointed by the President.

[11] Since the Treasury can only decrease its Reserve Bank balances to the extent that it has balances on hand.

Except possibly in periods of divided Congressional-executive party responsibility, Federal Reserve insistence on exercising its legal prerogative of independence might mean insistence upon extinction. Certainly this might be the case in times of crisis, such as war. A recent off-the-record comment of the governor of one of the world's major central banks describes a situation apparently common among central banks for many years. The governor was asked, "Do you feel your bank has the right to defy the government?" "Oh, yes," he replied, "We value that right very highly—and wouldn't think of exercising it." The power of the Federal Reserve Board is enormous and its legal right to exercise the power is unchallenged. Yet as an operating matter, Federal Reserve policy has reflected keen awareness of the executive leadership of the President and the key rôle played by the Treasury in government financial affairs.

IV. *The Problem of Obtaining More Effective Policy Formation*

A. *The Place of Monetary Policy Formation*

Any practically useful consideration of monetary policy formation must rest within the framework of the government's over-all policy-making. Often "economic" policy-making is indistinguishable from "political" or "military" or "international" policy-making. Seldom are important monetary policy decisions completely independent of other governmental policy issues. The interrelationships of monetary, debt, and fiscal policy are obvious. Realistically, however, decisions within this whole area are often conditioned, or even determined, by essentially "non-economic" considerations, and there is little point in pretending that formal administrative arrangements will alter this basic political reality. For example, in 1946-47 the need for monetary-fiscal policies to restrain inflation was clear. But housing was scarce and veterans' welfare stood high in the public mind. Easy credit for home construction was monetary dynamite, especially when the basic construction limitations were shortages of labor and materials. Yet government-guaranteed housing loans at low interest rates were supported by the housing and veterans agencies and were proffered to veterans with enthusiasm. The farm price support program was a similar case in point. Most important of all, quantitatively, since the war has been the huge defense and international aid program. At this extreme, it is clear that "monetary" policy considerations are properly overridden by the need for appropriate defense and war-preventive steps. But this situation is removed only in degree from many others in day-to-day government policy-making.

Effective coordination of monetary, debt, and fiscal policy is thus only one phase of the larger problem of effective government policy

formation. Monetary-fiscal policy becomes, in important areas, merely a side result of decisions on predominantly non-monetary issues. Viewed in this light, it is more difficult than is commonly assumed to be sure whether "economic" and "monetary" considerations have been given appropriate attention in the formation of government policy. But the evidence of the past decade, at least, suggests that integration of monetary policy into government economic policy has been substantially less than satisfactory. As between the Federal Reserve and the Treasury (monetary and fiscal policy), there has been reasonably close coordination, but mainly through subservience of Federal Reserve to Treasury views. Between monetary-fiscal policy and government lending policy, there has been conflict as often as coordination during the past decade. Between the monetary-fiscal-lending area and other governmental economic policy, coordination appears to have been haphazard, with most issues decided on an *ad hoc* basis without adequate government-wide consideration of inter-agency implications of policies adopted.

As a matter of practical government, a mechanism is needed to accomplish three purposes, whether attention is focused merely on the monetary-fiscal-lending area or on the entire sweep of the government's economic policy making:

1. To assure full information on, and consideration of, the important inter-agency implications of proposed individual agency policies prior to adoption (*e.g.*, the monetary and fiscal implications of housing lending programs);

2. To facilitate compromise between the agencies concerned of as many inter-agency differences as is practicable, resulting in informally agreed-on "operational" understandings or programs; and

3. To focus up for submission to the President, and perhaps ultimately to Congress, those major inter-agency policy conflicts on which no working agreement can be reached.

In principle, the President has adequate power to establish in his Executive Office such officials and procedures as are needed to coordinate government policies on economic stabilization issues. Or he may choose to do the job himself. But, in practice, neither approach is apt to work very effectively. The President is simply too busy to be concerned with adjudication of all the inter-agency policy differences that need attention, and experience with an *ad hoc* assistant informally delegated to achieve coordination suggests that this is not an adequate answer.

There is no easy solution to this problem. Establishment of an "Economic Assistant to the President," or some comparable position equal or superior to cabinet rank, to assume the continuing responsibility

for seeing that maximum progress is made on the three scores indicated may be a partial answer.[12] Attachment of the present Council of Economic Advisers to such an official might provide a more effective tie between the Council and top operating policy formation than has so far been achieved, while maintaining a substantial degree of long-run Council planning activities relatively free from current policy-problem pressures.

In the field of monetary-fiscal-debt policy, effective, continuous consultation between the government's top monetary-fiscal and lending officials *on a roughly co-equal basis* is essential if the three practical steps toward balanced, coordinated policy-making indicated above are to be achieved. For practical purposes, assuming continuation of existing agencies, these top officials are the Secretary of the Treasury, the director of the Bureau of the Budget, the chairman of the Board of Governors of the Federal Reserve System, and one (or at most two) representative of the lending agencies.[13] These four officials, with the chairman of the Council of Economic Advisers, should be the President's chief advisers in the field of monetary-fiscal-lending policy. As close members of his official family they need to be continuously aware of each other's plans, to settle most policy issues in the area among themselves, and to focus up major differences for consideration by the President. In short, together they need to form and put into execution the government's monetary-fiscal-lending policy, subject to the President's supervision and the ultimate conditions established by Congress.

Formation of a formal, but very flexible, National Monetary Council would appear to combine the best experience of the war and postwar periods in achieving these goals. Such a council might be composed basically of the four officials just indicated, with flexibility to add others in dealing with particular issues at either the request of the President or the wish of the council members. Such a council probably should, like the National Advisory Council, be established by statute which would direct the several agencies to consult through this mechanism, toward establishment of coordinated government policy to promote high-level employment and economic stability.[14]

[12] The repeated use of such officials on a more or less *ad hoc* basis during crisis periods is evidence in support of such an approach. Recent experiences range from establishment of the powerful Directors of Economic Stabilization and of War Mobilization and Reconversion during the war, to the more informal use by President Truman of Mr. Steelman as continuing economic assistant and his recent use of Secretary Brannon to coordinate the government's anti-inflation program before Congress. Experience suggests, however, that the more *ad hoc* is the basis of such arrangements, the less satisfactory they are.

[13] Substantial consolidation of the government's now sprawling lending activities into at most three or four centralized lenders would markedly simplify this problem.

[14] Such Congressional action might take the form of amendment to provide more

It is crucial that any such council, however, should be specifically responsible to the President and should possess extensive flexibility as to its *modus operandi*. Ultimately, the chief executive must be responsible for the establishment and execution of the government's monetary-fiscal-lending policies, within the framework established by Congress. The usefulness of such a council would be to focus up and facilitate effective execution of this responsibility, not to prescribe and limit the President's handling of his duties nor to vote formal directives to the agencies involved. Excessive statutory rigidity would lead to either unnecessary inefficiencies or increased by-passing of the established formal machinery as new-type policy problems arose. Statutory status, on the other hand, would help assure continuity between administrations and would provide each incoming President with at least a framework around which economic policy-making procedures could be organized in the difficult early period of the administration. But in the last analysis, the coordinating and policy-forming rôle of any such council depends basically on its standing in the eyes of the President and Congress as the executive group responsible for the stated functions. It will "work" if it becomes an informal, integrated part of the President's official family. If it does not achieve this status, no amount of formal specifications can make it an effective coordinating mechanism at the top-executive policy level in an area of such vital importance to the President, Congress, and the nation.[15]

Establishment of such a council could not guarantee coordinated action by the monetary-fiscal-lending agencies, much less by the multitude of government agencies whose activities directly or indirectly affect the level of economic activity. There is no neat, simple road to coordination of the many government policies having conflicting economic implications, especially when the major issues involved are often in other fields. The most any formal or informal arrangements can do is to provide a maximum opportunity for well-considered, coordinated policy-making. If they guarantee that the inter-agency economic implications of important policies are fully considered prior to adoption, that the maximum pressure for coordination consistent with effective agency operations is applied, and that issues not subject to amicable compromise are effectively referred to the President, little more can be expected.

effective implementation for the Employment Act of 1946, which has already established some mechanism in the economic stabilization policy field, both in the Council of Economic Advisers to the President and the Congressional Joint Committee on the Economic Report.

[15] A National Monetary Council might advantageously be combined with the existing National Advisory Council, which deals with international financial matters. Two members would surely be common to both councils.

B. *Role of Central Bank in Monetary Policy Formation*

The nation cannot brook a divided, obstructionist monetary-fiscal policy in crisis periods. The old concepts of central bank independence, based on a narrow view of central bank responsibilities, have been swept away by the realities of modern large-scale government financial operations in war and peace, and by recognition of government fiscal policy as a powerful countercyclical stabilization instrument. Only in periods of stability and normalcy is it realistic to conceive of congressional and administration acquiescence in central bank policies against the government's economic policies.

At bottom, it is the government's control over the money (liquid asset) supply that is at stake. Viewed in this fundamental light, the Federal Reserve's continuous responsibility to "the government," both the Congress and the President, becomes clear-cut and obvious. The real problem is how to obtain the most reasoned, deliberative judgment as to the proper exercise of the government's power over the liquid asset supply so as best to promote economic stability and government financial strength in time of crisis.

A strong case can be made for combining responsibility for the government's monetary, debt, and fiscal affairs in the Treasury. The Treasury has traditionally been associated with control of the government's power of money issue and retirement; it is now charged with executive fiscal responsibility. Complete centralized Treasury responsibility for both would guarantee a unified government monetary-fiscal policy in dealing with cyclical economic instability, war finance, and other problems. It should produce expeditious formation of policy and flexibility in dealing with crises. It should unmistakably focus responsibility through the Secretary of the Treasury to the President, who must ultimately be responsible for formation and execution of such executive-type functions as monetary and fiscal policies. Buck-passing would be far more difficult.

The case against consolidation of the fiscal and money-creating powers in the Treasury is that it may lead to too easy reliance on money creation, to too easy inflation, to too little emphasis on sound fiscal policies when they require heavy taxation and restricted government expenditures. The Treasury viewpoint, as history demonstrates vividly, will almost invariably tend toward "easy money," almost never toward *effective* monetary restriction when it comes to the action showdown. This tendency is greatly strengthened for the foreseeable future in this country by the huge outstanding national debt, whose maintenance at low interest rates and stable market prices will understandably impel Treasury preferences for easy money conditions for

many years ahead, in inflation as well as in depression.[16]

While this inclination toward monetary ease is unobjectionable in depressed periods, it precludes strong restrictive credit policies in periods of inflation, in war or peace. The dangers of excessively easy Treasury access to additional funds have been recognized for hundreds of years. They underlie the world-wide attempt during the past two centuries to check too easy government inflationary spending through establishment of "independent" central banks. But this experience has shown the unreality of the assumption that control over the money supply can or should be "outside" the government. It emphasizes that if a separate central bank is to play an effective rôle in the formation of sound monetary-fiscal policy, it must act *through* the government—through influence on the government's ultimate economic policies, not through obstruction and objection from outside.

The case for a separate central banking agency is simply that it can contribute a viewpoint in government monetary-fiscal policy formation that is specifically oriented toward the maintenance of over-all economic and financial stability. A strong argument can be made that only a separate agency, free from the Treasury's operating fiscal responsibilities, can be counted on to advance strongly the case for monetary restraint when restraint is needed. A central banking bureau of the Treasury could little hope to prevail in Treasury councils against the operational needs of large-scale fiscal policies.

What is needed is an equal hearing for the Treasury and central banking points of view in the determination of government policy, and then unified action on what policy "the government" judges best. A separate central bank can play an effective rôle only if its status is roughly equal to that of the Treasury in government monetary-fiscal councils. Its job should be to argue the case for monetary restraint when restraint is needed, regardless of the narrower debt management considerations that may dominate the Treasury thinking; to argue for monetary expansion where that is required is to mitigate instability.

[16] It should be clear that the case for a separate central bank thus rests largely on the conclusion that the Treasury will on the whole have an inflationary bias because of its operating responsibilities, and will *not* take the broader view of monetary-fiscal-debt policy that may be imputed to a central bank, freer of operating responsibilities and less susceptible to the pressures of organized groups in the economy. While this conclusion seems to me justified by the historical evidence and by the pressures foreseeably at work in the future, others may of course evaluate the evidence differently.

A strong Congressional directive to the Treasury to place commodity price and/or income stability above government security price stability in carrying out its fiscal responsibilities would lessen the need for a separate monetary agency. But even such a directive could not eliminate the fact that the Treasury's operating responsibility for raising money when needed, coupled with the inevitable human tendency to "play safe," would probably lead the Treasury always to assure overly generous financing facilities to itself through its central banking powers.

If Federal Reserve-Treasury compromise between equals proves impossible, the issue should be referred for informal adjudication to the proposed National Monetary Council or ultimately to the President himself. But once a government policy is determined, active obstructionist action by the central bank would be disruptive and untenable. Only the right to raise crucial issues directly with Congress should remain, and it is well to recognize clearly that this could be exercised *only on very rare occasions* if any effective Federal Reserve rôle in government executive policy councils were to be maintained.

The meaningful choice thus lies between (a) consolidation of monetary-fiscal functions in the Treasury and (b) establishment of a more important, responsible rôle for a separate Federal Reserve. The present arrangement provides the advantages of neither alternative and the disadvantages of both. On balance, the duality and inefficiencies of separate Treasury and Federal Reserve organizations appear to me to be justified by the advantages of maintaining in the government an independent credit policy viewpoint.[17] But the greater Federal Reserve "independence" *from the Treasury* should be established and protected if a separate central bank is to be maintained, and steps should be taken to implement the rôle envisaged for the central bank in government policy formation.

This reasoning suggests that the potential contribution of a separate central bank could be best obtained by:

1. Utilization of some sort of National Monetary Council upon which the Treasury and the Federal Reserve would sit *with equal voice;* and
2. Increased responsibility of the Federal Reserve to the President as one active major participant in the formation of executive branch economic policy. Further means for achieving this result are considered below.

Marked improvement might be obtained additionally or alternatively by making the Federal Reserve specifically responsible for all debt management. Thus the Treasury might borrow only, or largely, (at least during time of peace) from the Federal Reserve, and the Federal Reserve would have the power to issue and deal in its own securities vis-à-vis the banks and the public. Coupled with adoption of a security reserve plan to restore Federal Reserve control over commercial bank deposits, this plan might both restore the effectiveness of monetary controls and concentrate responsibility for monetary-debt policy in one agency so as to minimize simultaneously the opportunities for

[17] Though *effective* use of the President's Council of Economic Advisers to represent a non-operating monetary-fiscal viewpoint in governmental policy councils would substantially weaken the case for a separate Federal Reserve.

buck-passing, the chances of divided policy, and Federal Reserve-Treasury friction. Full exploration of this rather drastic reallocation of powers and responsibilities is beyond the scope of this paper; it may merit fuller investigation.[18]

C. *Internal Federal Reserve Organization for Policy-Making*

Experience suggests four important changes in the internal structure of the Federal Reserve to promote more effective participation in government policy formation.

1. Responsibility for all Federal Reserve policy formation should be concentrated in the Board of Governors. The present split responsibility between the Board and Open Market Committee attempts to divide what is indivisible in any meaningful view of monetary policy-making; it breeds friction; and it specifies a policy-making body unrealistically large for the type of work it must do to be effective. Concentration of all policy responsibility in the Board, coupled with a statutory requirement for periodic full consultation on system policy with the twelve Reserve Bank presidents, would vest responsibility for the nation's money supply in a specifically public body, appointed by the President with the approval of the Senate, while protecting adequately the broad regional interests which the regional system was aimed to safeguard. Monetary policy must be national and public in character; it has no room for regionalism or for special interests.

2. The Board should be decreased in size to three members, with six-year terms expiring at two-year intervals. This would decrease the likelihood of a continuing major policy difference between the Board and the president, yet retain the maximum quasi-judicial independence compatible with effective participation in government policy-making. A smaller Board would be in keeping with the realities of Federal Reserve relations vis-à-vis the Treasury, and it should provide a more efficient mechanism for internal policy-making. It would increase the attractiveness of Board appointments to outstanding men, who will seldom long be satisfied with membership on such a Board unless active participation in policy-making is involved. Yet in combination with a requirement of full consultation with the twelve Reserve Bank presidents on policy issues, it would protect adequately the deliberative

[18] A similar arrangement is suggested by Professor A. G. Hart, in "Monetary Policy for Income Stabilization" a forthcoming volume of the Yale University Committee on National Policy. Professor Jacob Viner urged as long ago as 1936 ("Recent Legislation and the Banking Situation," *American Economic Review, Proceedings,* March 1936, p. 118) that the Federal Reserve should be permitted to deal with the market in its own securities, though he did not propose the further step of Treasury borrowing solely or primarily from the Reserve. Viner's suggestion was merely to give the Reserve a power already possessed by many other central banks.

quality of Federal Reserve policy-making. If the need for a Board is not dominant, a good case can be made for a single executive head for the Federal Reserve, subject to the consultation requirements noted. Certainly, as a practical matter the board form is less effective in policy deliberations than might be superficially expected, and the policy contributions of many Board members have apparently been negligible during Federal Reserve history to date.

3. The Board chairman should specifically serve as chairman at the will of the President. Formal isolation of the chief Federal Reserve official from the President's official family is unrealistic and outdated. It only serves as a barrier to the "independent" force which the Federal Reserve is expected to exert on government monetary-fiscal policy formation.

4. Federal Reserve power to prescribe reserve requirements against deposits should be extended to all insured banks. This is clearly within the power of Congress, and is within the spirit of the existing F.D.I.C. Act which prescribes federal surveillance of all insured banks.

These administrative changes omit perhaps the most crucial consideration of all for effective monetary policy formation and participation in general government policy-making—that of obtaining and retaining top-calibre men. With outstanding leaders, the Federal Reserve will play a useful, influential rôle in government policy formation. Without them it will not, whatever formal administrative arrangements prevail. The goal of making Board membership more attractive to such men should bulk large in any consideration of potential statutory change; it is implied in the steps suggested above. To these most important inducements of increased responsibility and policy participation could be added higher salaries and freedom from the present special interest requirements that prescribe regional and economic group qualifications for Board members.

MEMORANDUM ON THE STABILITY OF DEMAND DEPOSITS

By C. R. WHITTLESEY*

What Mr. Hawtrey described as the "inherent instability of bank credit" has long held a central position in discussions of the commercial banking process; it is sometimes made to appear as the predominant characteristic of banking and even of the monetary system as a whole. The tendency for operations of the commercial banking system to produce inflationary effects in periods of inflation and deflationary effects in periods of deflation has been an integral part of the so-called monetary theory of the business cycle. Measures for combatting the tendency for deposits to expand or contract unduly have come to occupy an increasingly important place in central banking; indeed, the essential function of a central bank is said to be the creation and absorption of reserves for the purpose of promoting economic stability.[1]

The effect of changes in the character of bank assets has been to alter the basis on which the alleged instability of bank credit rests. It must, therefore, be assumed that the phenomenon itself has been greatly modified. To say, for example, that a severe contraction of the volume of demand deposits (comparable, for example, with that which occurred in 1929-33) is no longer possible is less a forecast of the future than a corollary of developments which have already taken place. The passing of the "inherent instability of bank credit," certainly as the concept has customarily been understood, is of more than theoretical consequence. In view of the conspicuous place the concept has occupied in discussions of business cycles and central banking policy, the conclusion has important practical implications as well.

Instability of Bank Credit, Past and Present

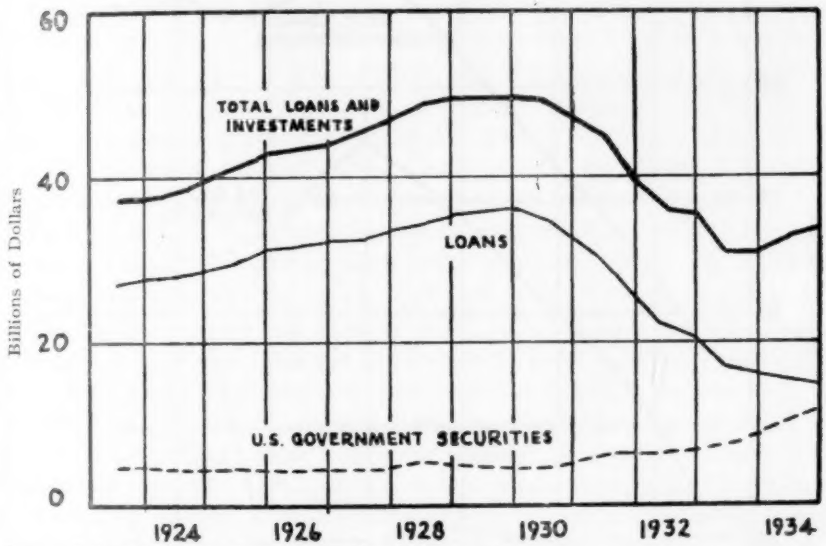
The theoretical explanation of the "inherent instability of bank credit" is essentially as follows. Creation of demand deposits is assumed to result from the granting of loans and discounts by commercial banks. The volume of loans and discounts will presumably vary with

* The author is professor of finance and economics, University of Pennsylvania, and economist of the Penn Mutual Life Insurance Company.

[1] Board of Governors of the Federal Reserve System, *Banking Studies* (Washington, 1941), pp. 17-18.

the dollar volume of business. Rising prices and increasing business activity will lead, therefore, to an expanding volume of bank deposits. The expansion of bank deposits, in turn, will contribute toward a continuation of the upward movement of the dollar volume of business. This combination of relationships provides all the elements of a continuing upward spiral. Conversely, falling prices and business activity will result in a contraction of loans and discounts, the calling of past loans, and in the end a contraction of demand deposits. The resulting destruction of circulating medium will contribute to a further down-

CHART I.—COMMERCIAL BANK LOANS AND U.S. GOVERNMENT SECURITIES, 1923-1934



Source: *Federal Reserve Charts,* December 1948, p. 11.

ward movement. Such a combination, on conventional quantity theory reasoning, provides the basis for a continuing downward spiral of prices and business activity.[2] The substance of this analysis is that bank credit is not only inherently unstable, but is unstable in a manner both sympathetic with and conducive to swings of the business cycle.

The connecting link in this description of the inherent instability of bank credit is the granting of loans and discounts by commercial banks. Accordingly, it is the diminished relative importance of commercial paper, or more specifically, the changed relationship between loans and government securities[3] in the portfolios of commercial banks that pro-

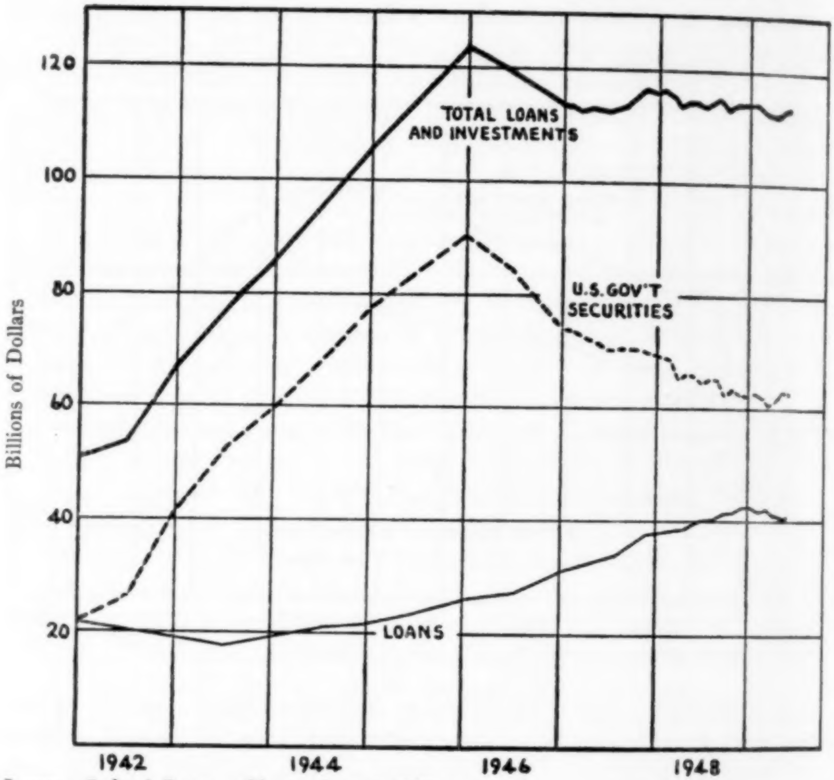
[2] *Cf.* the remark that ". . . prices, released from any physical standard of value, would vary without limit." R. G. Hawtrey, *Currency and Credit* (London, Longmans, 1928), p. 14.

[3] The term government securities as used here refers to Treasury obligations only.

vides the principal reason for believing that bank deposits will no longer behave in an inherently unstable manner.

Throughout the 20's and the early 30's loans constituted the principal element in the earning assets of commercial banks (Chart I). The predominance of loans explains why what happened to the volume of loans was looked upon as determining what happened to the total

CHART II.—COMMERCIAL BANK LOANS AND U.S. GOVERNMENT SECURITIES, 1942-1949



Source: *Federal Reserve Charts*, August 1949, p. 9.

of demand deposits. In the decade of the 40's the relationship between loans and government securities in the portfolios of commercial banks came to be the reverse of what it was 20 years earlier. Today the principal element, quantitatively, among the earning assets of banks is government securities (Chart II). Thus, it would be consistent to argue that changes in their volume will tend to determine the movement of demand deposits. Or to the extent that they prove less volatile than loans, their relative stability would tend to moderate the effect of changes in the volume of loans. Since the volume of government securi-

swollen Treasury deposits, but the decline continued in 194

ties held by commercial banks cannot be expected to behave in the manner that characterized holdings of loans and discounts, it would seem to follow that instability in the volume of deposits such as prevailed in the past can no longer be anticipated. Instability might conceivably occur, but it would not be instability of the former type. This conclusion is of substantial consequence, but it is possible to go much further than so negative a statement. Not only does it appear certain that the volume of bank deposits will no longer behave in the traditionally unstable manner;[4] it is possible to argue that the volume of deposits can be expected in the future to behave in a relatively stable, and perhaps even stabilizing, manner.

At the end of 1945, government securities constituted nearly three-fourths of the earning assets of commercial banks. Even with the decline in bank holdings of governments and the growth of loans which occurred after the end of the war, Treasury obligations represented over 55 per cent of earning assets at the end of 1948 compared with only 10 per cent in June 1929.[5] Not only is there no reason to expect the volume of these assets to rise and fall in sympathy with major changes in business conditions; there are historical as well as logical reasons for expecting them to move in the opposite manner. Historically, it may be noted that between 1929 and 1933, when the volume of commercial bank loans fell sharply from 35.7 billion dollars in June 1929 to 16.3 billion in June 1933, commercial bank holdings of United States government securities increased from 4.9 billion dollars to 7.5 billion (see also Chart I). At that time the proportion of governments was too small for the growth in their volume to exert a dominating influence on deposits. One may ask what would have been the effect on deposits if governments had constituted as large a proportion of total earning assets as they do today. If it could be assumed that the same tendencies would have prevailed with respect to changes in holdings of governments and non-governments including loans and that only the proportions were different, the total of deposits, instead of declining sharply as they did from 49 billion dollars to 31.9 billion, would have increased.[6] The same general pattern of behavior was exhibited still more recently when the volume of government securities held by commercial banks declined substantially with expanding business and rising prices from 1945 to the middle of 1948. The earlier and sharper part of this decline is accounted for largely by the drawing down of

[4] That is, sympathetic with and conducive to swings in the business cycle.

[5] The question of possible fluctuations in the relatively smaller but still substantial volume of loans is examined below.

[6] Since this is a purely hypothetical comparison, no attempt is made at refinement to limit the comparison to demand deposits, to eliminate interbank deposits and the like.

swollen Treasury deposits, but the decline continued in 1947-48 with no significant pressure from this source. Bank loans, on the other hand, followed the opposite course during the same periods.

Without suggesting that the correlation is perfect, it appears that historical evidence in these years, as also in the period 1919-22, supports fairly well the view that bank holdings of governments may move contrary to bank loans during major fluctuations in business activity. It would be unwise, however, to push the argument very far on historical evidence, inasmuch as the period since banks became important holders of Treasury obligations is short and has been influenced by various highly irregular factors.[7] More convincing support is to be derived from deductive analysis.

The logical explanation of the difference to be anticipated in the behavior of bank holdings of governments and of loans is primarily that the total volume of loans and discounts is functionally related to the dollar volume of production and trade while the total of government debt outstanding tends, wars to one side, to increase in bad times and decline in good for budgetary reasons. It does not follow, of course, that the amounts of each type of asset held by banks will vary directly with their respective totals. Nevertheless, the totals are at least significant as influencing the supply available for purchase by banks.

A tendency for the amounts held by banks to vary, generally speaking, in the same direction as the totals of loans and governments outstanding is further strengthened by the consideration given to the relative quality of loans and Treasury obligations in different stages of the cycle. With a worsening of business conditions, banks not only call old loans and scan new loans more closely but in the past they have been forced by the supervisory authorities to adopt a more restrictive lending policy at such a time.[8] The adherence by bank supervisors and Federal Reserve officials to relatively strict policies in the early 30's in pursuance of what they regarded as the sound principles of commercial banking and the gold standard is well known.[9] While a negative attitude toward loans during a depression will presumably be less strong in the future, it cannot be supposed to have disappeared altogether. Holdings of government securities by banks, on the other hand, are wholly safe from criticism by supervisory authorities; on this point there appears to be complete agreement among

[7] For example, the attitude of supervisory authorities, changes in reserve requirements, uncertainty with respect to interest rates, etc.

[8] The 1938 ruling on bank examinations may be assumed to have relaxed somewhat the tendency toward greater stringency of loan procedure in bad times.

[9] Compare also Homer Jones, "Rules and Procedures in Bank Examinations," *Jour. Pol. Econ.*, Vol. XLVIII, No. 2 (Apr., 1940), pp. 183-98.

officials and bankers alike. The disposition of bankers to shift to Treasury obligations in times of growing uncertainty because of the high quality of these securities[10] is therefore reinforced by the fact that they are able to do so without risking the future displeasure of examiners.[11]

The foregoing observations are sufficient by themselves to suggest that with the present high proportion of government securities in bank portfolios the basis of the "inherent instability of bank credit" has been fundamentally modified. This is not to say that instability of bank credit has become inconceivable,[12] but rather that such instability is scarcely "inherent" (certainly not for the same reasons) and that it cannot be expected to conform to the conventional pattern.

It is to be observed further that even within the much narrower ratio of total earning assets which loans now occupy in bank portfolios (38 per cent of combined loans and investments of all commercial banks at the end of 1948 against 72 per cent in the middle of 1929[13]) loans can hardly be expected to display as great a degree of instability as characterized their behavior in the past. The fact that the volume of bank loans doubled between 1944 and 1948 might seem to suggest that they are as unstable as ever, but it is significant that the loan portfolio differs from that of the past, not only in relative magnitude but also in the character of the loans themselves. Today, loans of commercial banks include a substantial volume of term loans, real estate loans, and consumer loans. The contractual maturity on loans of these types, consumer loans included, is much longer than that on loans of the types which predominated in the past. Because of these differences, they are not subject to automatic contraction to the extent that was possible earlier, nor is it possible for the banks or the authorities to force a contraction of loans to the degree that they could in the 30's.

[10] This statement may seem to underestimate the effect of differences in interest rates. It reflects, first, a conviction that regard for quality may often be more important than rate of return in the decisions of bankers and, secondly, a recognition of the possibility of adjusting return on investments, within fairly broad limits, by modifying their maturity distribution.

[11] The great influence exerted on the action of bankers by the indicated or anticipated wishes of examiners has not been sufficiently recognized by students of banking.

[12] Any attempt to analyze the character of the instability that might arise with the present composition of bank portfolios would require assumptions concerning interest rate patterns, official support of the security market and attitudes on the part of bankers and supervisory officials into which it is not possible to enter here. The most reasonable expectation—as is perhaps sufficiently indicated in the text—is that, compared with the past, a high degree of stability of bank credit is more probable than a corresponding degree of instability.

[13] No attempt is made here to discuss investments other than Treasury obligations. It is probable that separate consideration of them would strengthen the argument rather than otherwise.

Loans to brokers and dealers and loans on securities, both of which are subject to severe contraction in a falling market, represented a large volume of bank assets in 1929 but are negligible today. In view of these various changes within the loan portfolio, bank loans can no longer be expected to undergo as great contraction, spontaneous or induced, as characterized major depression periods in the past.

A final factor contributing to the stability of deposits is that cash assets, including legal reserves, represent a higher proportion of deposits today than formerly. Indeed, the mere fact that banks are now subject to roughly double the reserve requirements that prevailed before 1936 means that the multiple of deposit expansion—upon which, after all, the "inherent instability of credit" fundamentally rests—is about half what it used to be.

Relation of Deposit Stability to Cycle Analysis

The probable tendency for holding of government securities to counteract to some extent changes in the volume of loans and discounts in bank portfolios and, therefore, to promote the stability of bank deposits has been noted. Even on the conservative assumption that holdings of government did not change and that loans and discounts were as unstable as ever, the *relative* change in deposits would be considerably less than in the past. This follows from the fact that loans and discounts are so much smaller a proportion of the total assets of banks. The effect of such changes as may still be induced by variations in the loan portfolio will be modified by the fact that the total volume of circulating medium is now so large. The present situation resembles that which once applied with respect to the gold standard when the existence of a large stock of gold prevented annual additions to the supply from having a material effect on the value of gold.

The probability that increased stability of demand deposits will contribute to more stable price levels and business activity is suggested by familiar quantity theory reasoning. The possibility that greater stability in the volume of deposits will tend to reduce variations in the rate of turnover of deposits is likewise familiar. The reasoning is simply that a change in the volume of money, by causing a rise or fall in prices (again on quantity theory grounds), contributes to a speeding up or retardation of velocity in anticipation of further changes in the price level. In other terms, it alters the speculative motive for liquidity preference. However it is described, such changes in the rate of turnover would be lessened, presumably, by greater stability of the money supply.

Less widely recognized is the stabilizing effect on economic activity which tends to result automatically from changes in the level of prices

under conditions of a constant money supply. It has been pointed out that with a rise in the quantity of money relative to the volume of transactions, there must be either higher prices or greater liquidity.[14] It can also be said that with falling prices and a relatively stable money supply there is an increase in liquidity.

In simplest terms, every decline in prices is an increase in the purchasing power of the dollar; if the number of dollars remain constant, the total money supply constitutes a larger sum of available purchasing power. With a stable money supply, rising prices reduce and falling prices increase total purchasing power in the hands of holders of money, meaning by total purchasing power the sum of goods and services which their money collectively represents. Total effective demand—that is, what actually *is* bought—does not necessarily increase with falling prices since rate of use of money may conceivably decline by enough to offset the increase in the goods equivalent of money. But potential demand—what *can be* bought at the velocity prevailing previously—necessarily does expand with falling prices and a constant money supply. Moreover, the probability that this potentially stabilizing influence will be defeated by a decrease in velocity should be less, as was previously noted, with a constant than with a contracting money supply.[15]

To the effect which falling prices may have on the community's liquidity through the money supply must be added the similar effect they may have on "near-money" and other types of liquid assets. The purchasing power represented by holdings of time deposits, war savings bonds, and other government obligations likewise increases, dollar for dollar, with a fall in the price level. In the past the volume of non-cash liquid assets was likely to decline with falling prices, and to the extent that they were in the form of obligations other than of the Treasury their quality was also likely to deteriorate. For both reasons the sum total of liquidity represented by non-cash assets, far from increasing, was almost certain to diminish in times of falling prices and worsening business conditions. In the case of the liquid assets for which the United States government is directly or indirectly responsible, this will no longer be true. For a significant segment of the assets, moreover, the Federal Reserve Banks provide an added source of liquidity.

[14] See my *Principles and Practices of Money and Banking* (New York, Macmillan, 1948), pp. 423-24.

[15] In alternative terminology, a change in prices alters the amount of money that has to be held to satisfy the transactions motive for liquidity. With a constant money supply, this exerts a stabilizing tendency on the price level, except as the tendency is offset by a contrary effect on the speculative or precautionary motive. The possibility of an offsetting effect would still exist, but presumably would be less strong than where the volume of deposits was also changing.

Thus we now have, in addition to a large and stable money supply, a large volume of other liquid assets whose liquidity seems assured.

If, then, the total volume of money and other liquid assets remain approximately constant, rising or falling prices produce an automatic stabilizing potentiality through reducing or increasing the sum total of purchasing power which these assets represent. The importance to be attached to this factor does not rest on acceptance of the view that the total of these assets will be completely stable. The same consideration applies in whatever degree the volume of money and other liquid assets is less unstable than in the past.

One of the principal contributions of Keynesian economics was to emphasize the effect of falling prices, including wages, on income and therefore on the chief source out of which expenditures could be made. While this line of reasoning stressed that "every level of production is potentially self-financing," it served to discredit the view that recovery could be achieved through the sort of price and wage reduction favored by those who advocate achieving adjustments by means of price flexibility.[16]

The logical conclusion from what has just been said about the importance of a constant money supply is that in the future the tacit classical assumption of a more or less constant total demand may become rather more realistic. Because of the size of liquid assets and their probable greater stability, it can no longer be assumed with the former certainty that falling commodity prices and wages will correspondingly reduce total spending. To an extent that was never possible in the past, a reduction in spending out of income may, conceivably, be compensated by an increase in spending out of liquid balances. We now have a situation, therefore, where the classical assumption of an elastic demand with falling commodity prices and wages might tend to hold true.

Translated into more concrete terms, this means that in a period of falling prices the community, as a whole, including businesses and individual consumers, may experience little or no shrinkage in the size of liquid balances. While the balances may be shifted about, the bulk of them, probably, will continue to exist somewhere in the economy: most of the money and near-money will still be present. Individuals and businesses which were holding working balances and balances for some particular use in the future are not likely to find these

[16] There has frequently been a tendency to relate total effective demand too exclusively to income, and to disregard the possible relation of liquid balances to anticipations, investment and the consumption function. This sort of "crude" Keynesianism is suggestive of the crude quantity theory reasoning which characterized an earlier stage of monetary thinking.

balances vanishing before their eyes to the same extent as happened, say, after 1929. There would seem to be a greater probability, therefore, that they will employ these balances for their intended purposes.

While the possibility, based on past experience, of a further decline in prices would still tend to discourage buying at current levels, the inclination to spend at each new low level would hardly be checked to the extent that it formerly was when the size of the public's cash balances was going down along with prices. The potentiality of sustained spending is not, of course, the same as the actuality. Even the potentiality constitutes a significant difference compared with the past, but in addition the potentiality not only permits but tends to produce the actuality: to whatever extent the potentiality is exercised it helps to check the decline, contradict pessimistic anticipations and induce optimistic anticipations. On the other hand, to the extent that the potentiality of increased purchasing is not exercised and the decline in prices continues, the greater is the rise in real value, *i.e.*, in potential purchasing power, of liquid balances and the greater the magnitude of the demand that can result from this source when spending is finally renewed.[17]

Implications for Monetary Policies

No one would insist that the present monetary outlook is altogether reassuring. The ability of member banks to convert a large proportion of their assets into reserves more or less at will may appear, for example, to constitute a danger of serious credit expansion. For those who still retain confidence in interest and discount rates as regulators of the volume of credit, moreover, efforts to maintain relatively stable interest rates may suggest resulting instability elsewhere. Whatever instability in the volume of credit may exist in the future will rest, however, on a different basis from that which gave rise to the concept of the "inherent instability of bank credit."

The different basis of possible instability of bank credit implies that monetary policy in the future must be of a different character from what it was in the past. The probability that future fluctuations in the volume of bank deposits will be smaller carries the further implication that monetary policy as we have known it will be less important than in the past, if for no other reason than that monetary policy has traditionally been directed primarily toward influencing the volume of circulating medium. Greater stability in the supply of money implies, in so far as the quantity theory has any validity at all, a more stable level of

[17] The foregoing discussion is still based on the assumption that the total of money and near-money remains nearly constant. The reasoning applies partially, however, as long as the total is less unstable than in the past.

prices. Such changes in prices as do occur may tend to be associated more closely with changes in the rate of use of money and less closely with the total volume of money. This also would have policy implications, as will be noted presently.

To the extent that the volume of circulating medium maintains greater stability than in the past, it would seem to follow that the reduced effectiveness of the familiar instruments of Federal Reserve credit control is likely to be less serious than is now currently assumed. This would not be because the loss of effectiveness is less than has been alleged or because changes are to be anticipated which will restore their potency.[18] It would be because these instruments of credit control are primarily devices for influencing the quantity of money, and the quantity of money had become a less volatile factor.

Assuming that the foregoing interpretation is correct and the total supply of circulating medium maintains a relatively high degree of stability compared with the past, it would seem that monetary policies of the future must be directed more to the use of money and less than heretofore to quantity. Selective credit controls are free of many of the shortcomings that attach to the more traditional instruments of policy and may be expected to assume greater importance. While they have their quantitative aspects, their focus is on non-monetary rather than monetary forms of credit. Moral suasion and other psychological methods of influencing business would be likely to experience greater development, along with new methods yet to be discovered. The vacuum left by the declining importance of monetary control would still further direct attention toward the use of fiscal policies, which are uniquely adapted to influencing the behavior rather than the quantity of money. Those who fear the rising importance of fiscal policy must

[18] Mr. Randolph Burgess is authority for the statement that the principal effect of changes in the discount rate was psychological: "The most powerful influence of a rate change is . . . psychological. . . . The rate change was a pronouncement by well-informed men concerning the credit situation made at a time when a change in direction of movement was ready to occur or was in process due to other causes." *The Federal Reserve Banks and the Money Market* (New York, Harper, 1936), p. 230. According to this view a change in the discount rate was a form of sign language by which the Federal Reserve indicated its judgment concerning economic conditions. To say, as Mr. Burgess has elsewhere done (National Debt Series No. 7, Committee on Public Debt Policy [New York, 1948], p. 10), that loss of the discount weapon seriously interferes with the ability of the Federal Reserve Banks to control credit is to imply that there is no other way by which the Reserve authorities can satisfactorily indicate their opinion concerning the state of economic activity. Needless to say, I believe the first point of view is valid but not the second. With respect to the future, it is to be noted that the loss of Federal Reserve control over member bank reserves occurred when interest rates rose in 1947-48 to the ceilings set by the Federal Reserve (prices of governments fell to the support levels). For reasons that should have been apparent at the time, this movement was temporary; with the rise in prices of governments above the support levels (decline in interest rates), the condition of extreme weakness was largely overcome.

draw what encouragement they can from the hope that, with a more stable volume of money, business fluctuations will be more moderate and, therefore, there will be less occasion for fiscal and other policies for influencing business activity!

Greater stability of the money supply should tend to cut the ground from under the principal criticisms of the financial system and the leading proposals for financial reform. The "inherent instability of bank credit" was the basis of the chief attacks on the banking system. To the extent that it was regarded as a cause of cyclical fluctuations, it was the basis of some of the most persistent criticisms of the entire free enterprise system. Many of the plans for banking and monetary reform which bankers have found most objectionable, such as Fisher's 100 Per Cent Reserve Plan and the recent proposal advanced by the Federal Reserve Board for a special security reserve, are pointed directly against the traditional instability of bank credit.[19]

Amelioration of the inherent instability of bank credit and the emergence of a large and probably more constant volume of money and near-money are legacies of the Great Depression and the Second World War. It is a curious thought that two such great disturbances may have contributed substantially to the future stability of the monetary mechanism and even, perhaps, of the general level of economic activity. Basic to this potential stability of the money supply is the size and distribution of the federal debt. Thus it may turn out that the national debt, whose growth filled the financial community with continuing dismay, will have become a bulwark of its strength and stability.

[19] The immediate purpose of the security reserve proposal, of course, was to limit the power of member banks to force the Reserve Banks to create reserves.

THEORY OF THE FIRM: SOME SUGGESTIONS FOR REVISION

By W W. COOPER*

To date the formal theory of the firm as presented, say, in most economic textbooks has successfully withstood various complaints and criticisms. Whatever sympathy we may tacitly feel concerning the validity of some of these complaints, the general feeling seems to be that this theoretical apparatus forms an indispensable tool for economic analysis. Without it (or some variant) the economist has no tools supplied from his discipline and is forced to rely instead on whatever judgment or insight he individually may possess.

One of the more serious charges that can be leveled against this theory concerns the rich variety of problems that preoccupation with this mechanism has excluded from the purview of the theorist. He has, perhaps, been somewhat too hasty in brushing aside fairly common patterns of business behavior as irrationality, frictions, or other categorizations. The following item from the *Wall Street Journal*[1] discussing recent price behavior of canned and frozen foods furnishes a case in point:

> Four boom years of record farm income have buttressed the bargaining position of growers. Often in prewar, pressure from bankers to pay off notes frequently forced them to settle for prices below their wishes. Today they enjoy unprecedented financial independence.
>
> Canners are reluctant to pay the prices the growers ask (in the face of large surpluses of canned and frozen foods); so the contracting for crops lags. A cannery association spokesman says: "Everybody is playing it cagey—holding back, sitting down and taking a look at inventories around the country, and waiting for the other fellow to make the first move."

Explanation of such behavior patterns is awkward within the confines of strict profit maximization. The all consuming category of uncertainty may be brought into play, but even this analysis becomes labored when it is noted that similar production conditions and price uncer-

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[1] Vol. CXXIX, No. 31, Thursday, February 6, 1947, p. 1. See also Vol. CXXVIII, No. 119, Monday, November 18, p. 1.

tainties have at times produced opposite results. (One of the difficulties of uncertainty theory as applied to the firm is that we have no effective measuring instrument.) A case might be made, it would seem, for analyzing the effect of the cash position of these "firms." In particular, a case might be made for analyzing the relation between cash position[2] and control retention—or, more generally, between liquidity, profit, and control.

The problem of control retention may be divided into two parts, what might be called the "inside" and the "outside" problems.[3] In the first direction lies the task of formulating an adequate theory for describing the behavior of agents appointed by the entrepreneur and subjected to specific control mechanisms.[4] In the second direction lies the province of top management. Since the first problem will be dealt with at greater length in a subsequent article, attention will be here devoted primarily to the second.

One of the characteristics that distinguishes top- from lower-echelon management is the problem of administering the equity accounts[5]—

[2] Various measures of cash, or liquidity, position might be adopted such as absolute cash position, quick ratios, current ratios, etc.

Such analyses might also throw considerable light on oligopoly behavior and the conditions under which "discipline" can be maintained. It seems reasonable to expect that when cash position has deteriorated to where control of the individual firm by the entrepreneur is imperiled, quite different behavior patterns may emerge than when cash position and control retention are "secure."

[3] The problem of terminology is difficult. Since the words *micro* and *macro* have already been drawn into economics with specific meanings, the terms "atomistic" and "subatomistic" ayers of the firm's operations might be used to describe the distinction drawn above.

[4] It is surprising, for example, how high one can go in the official hierarchy of many large organizations without being able to locate persons who are familiar with the prices of factors and/or products with which they are dealing. I have elsewhere argued for the need for an approach to economics as an aspect of administration, including the problems of delegation and control. In a complex operation it is fairly common for even top management (including the entrepreneur) to know neither costs nor prices of particular commodities or orders. I hope to discuss the techniques of cost control in a subsequent article. As for prices, it is necessary to distinguish between specific pricing of the kind generally posited by theory, and a price policy for general commodity lines—*e.g.*, "meet the market," "lead the market," "follow the leader," "cost plus," etc. Top management frequently confines itself to over-all policy formation and review.

A vivid illustration of what is involved has recently been drawn to my attention involving a large, nationally famous corporation which is generally regarded as something of a model of efficient business administration: The board of directors was convened to consider raising prices—*i.e.*, changing the policy—over a wide variety of lines. Preparatory to the decision, certain subordinates had calculated price indices for the first time in the company's history. As a result of these calculations, it was discovered—because of delays between new orders and billings—an automatic price increase of considerable magnitude had already come into effect. Since the company would thus receive many millions of dollars in revenues that had not been expected and the anticipated losses would automatically disappear, the proposal to "increase prices" was abandoned.

[5] *I.e.*, both liabilities and net worth, including the problem of dividend declarations—a problem, it should be noted, about which contemporary theory is almost entirely silent.

The following quotation from Edwin L. Cady, *Industrial Purchasing* (New York, John Wiley

of so arranging the corporation's assets as to be able to meet impending claims and avoiding bankruptcy.[6] Down-the-line management has virtually no contact with these problems. Neither "meeting next Thursday's pay roll" nor arranging financing is their immediate concern.[7]

& Sons, Inc., 1945) p. 171, is of interest in its discussion of division of responsibility between the purchasing agent and top management:

"Cash positions of companies make big differences. During business depressions as many as 90 per cent [sic] of all companies may find it hard to meet their weekly payrolls. If this is the case, inventories must be kept low no matter what the advantages of using them, unless the bankers will lend the company money with the inventory as collateral, or the company can borrow on some other basis so the payrolls can be met.

"Because of these (and other) factors . . . the control of inventory is seldom completely in the hands of the purchasing agent. Usually this is a subject for the financial management of the company including the president and the treasurer . . . ."

[6] Not only in the equity and statutory sense, but including quasi as well as legal reorganization. Again it should be noted that theory has been almost entirely silent on this important subject. (There is, of course, the notion of economic failure, but as N. S. Buchanan notes in "The Economics of Corporate Reorganization," *Quart. Jour. Econ.*, Vol. LIV, No. 1, p. 29, "An examination of the theoretical literature in economics reveals that writers have apparently not thought it necessary to define 'failure' and rarely even employ the term . . . .")

Lack of theoretical analyses of bankruptcies and insolvency is surprising not only because bankruptcies represent an important imperfection but also because they tend to happen under circumstances and at "rates" (at phases of the cycle) which admit of "rationalized" solutions—both in the strict and broad sense of that term.

[7] In economics, neither cash nor accrual concepts are ordinarily distinguished. As for profit maximization, it is difficult to discover by reference to economic literature whether it is rate of return on net worth, on cost, on sales, etc., which is being maximized. Throughout this article, it is profit in the accrual sense that will be utilized.

The above comments suggest the possibility of analyzing factor substitutions in terms not only of price but also cash flexibility. Labor, for example, whatever its price flexibility may be, is notoriously unyielding in terms of cash demands. Bondholders and stockholders, on the other hand, have often conceded short-run cash for the prospect of long-run price increases for their services. The following quotation from an article, "Union Responsibility Based on Information," *Labor's Monthly Survey*, Vol. 9, No. 11, p. 6, prepared by the American Federation of Labor instructing its members on the use of financial statements is of interest in this connection:

" . . . Most of its [the specimen company being analyzed] working capital is in inventories and accounts receivable, and it must count on selling its products quickly and collecting its bills promptly in order to meet its obligations. This means that if a large new order came in, the company might be pinched for cash to buy materials and hire more workers. Worse yet, if business dropped off and inventories sold more slowly the company might be short of cash, and in this case its first move might be to lay off workers. Adequate working capital helps to make workers' jobs more secure."

The company selected by the union for analysis is indulging in overtrading, as judged by the ratios of net sales to tangible net worth and net sales to net working capital. *Cf.* Roy A. Foulke, *Practical Financial Statement Analysis* (New York, McGraw-Hill, 1945), Chaps. XIV and XV. Should the company grant the recommended wage increase, serious impairment of its cash position would result from the reduction in government equity through the draw-down in accrued taxes. The union notes, in fact rests a large part of its case, on the tax reduction charged to profit and loss but does not project this effect into the balance sheet. Marked instability upon the occurrence of unforeseen factors is, of course, characteristic of companies engaged in overtrading—frequently highly profitable companies—and is what makes financial analysts cautious in approaching them. In view of the subject of this paper it is worth quoting Mr. Foulke's recommendation (*loc. cit.*) on the profitable Ladies Coat Company, Inc., which he has selected for analysis: "The only answer to overtrading [for this company] is for the

It is in this direction that control retention lies. Put somewhat differently, control retention frequently involves questions of reconciliation between profit-and-loss statement and balance-sheet considerations.

Turning to strictly theoretical aspects, it might be said that economics has at least two theories of the firm: the banking firm and the business firm. With slight exaggeration, it may be said that the theory of the business firm is presented entirely from the profit-and-loss statement point of view, while the bank is analyzed in terms of its balance sheet. In one case, an elaborate paraphernalia of cost and demand curves serves as the foundation of analysis. Profit maximization reigns supreme. In the other case, this apparatus disappears. Attention is focused on balance-sheet position, and primary emphasis shifts to liquidity (reserve maintenance) considerations as a means of meeting equity commitments (deposits).

It seems fair to assume that a more general theory of the firm, whether of the bank or business variety, would involve both balance-sheet and profit considerations. Moreover, control considerations need to be built into the theory. After all, the entrepreneur is not interested in maximizing profits *per se*. It is his profits that he seeks to maximize. Loss of control in the pursuit of profits may succeed only in maximizing someone else's profits. Fortunately, the problem of control maintenance (at the atomistic level) and the introduction of balance-sheet considerations seem to point in the same direction.

Control Maintenance at the Atomistic Level

Numerous methods suggest themselves for dealing with the problem of control maintenance at the atomistic level. For convenience, these numerous methods may be divided into the "direct" and "indirect" approaches. Professor M. W. Reder for example, has used a variant of the former in his article, "A Reconsideration of the Marginal Productivity Theory."[8] In his approach, Dr. Reder assumes that an entrepreneur is confronted with two profit-output timepaths. The greater of the two profit paths, while abstractly more desirable, involves securing capital on terms, which, while financially advantageous, imperil control.[9] Reder concludes that it is quite possible that the entrepreneur will not, as profit-maximizing theory implies, necessarily choose the greater of

management to plan and budget its operations so that [the highly profitable] net sales will not exceed a certain amount, that amount to be predicated upon the level of liabilities that will be incurred during the high point of the season, and the income [converted to liquid assets] to meet obligations on time with a reasonable margin."

[8] *Jour. Pol. Econ.*, Vol. LV, No. 5 (Oct., 1947), pp. 450–58.

[9] *E.g.*, the lender may require deposit of the controlling stock interest as collateral which the borrower agrees to forfeit under stipulated conditions. Other cases such as dilution of equity, etc., spring readily to mind.

the two paths.[10] Although Reder does not develop his formal analysis further, he points out that it has serious consequences for various parts of economic theory.[11]

Although this approach has the merit of bringing the control element directly to the fore, it also presents certain difficulties. For one thing, it is inflexible; for another, it is exceedingly difficult to obtain direct measures of control.[12] It does not adequately take into account various alternatives that the entrepreneur may have available. He may, for example, choose and select customers; he may offer differing discount arrangements; and he may use the business itself (perhaps at the expense of present profits) as a means of raising funds.[13]

In any event, the direct approach has been explored to some extent. Attention will therefore be directed here to the use of an indirect approach. For this purpose it is necessary to combine balance sheet and income statement measures. Since the balance sheet, which yields measures of liquidity, is primarily concerned with stocks (rather than flows), certain difficulties may be encountered. For the most part, these difficulties may be avoided by combining balance sheet with income statement measures. Thus, liquidity position may be defined in terms of a turnover rate of, say, cash to sales;[14] profit may be defined as return on net worth, etc. To a large extent the choice of measures is arbitrary and will depend on the nature of the particular problem. The notion should, however, be clear. Two variables may then be defined: $M(t)$, cash position, and $\pi(t)$, profit position, at time t. Similarly, output position is defined as $q(t)$. From these variables, two preference functions may be constructed:

$$M(t) = \phi[q(t)] \tag{1}$$

$$\pi(t) = \psi[q(t)] \tag{2}$$

[10] The choice will certainly depend in part on the difference in potential profits yielded by the two paths.

[11] On tax incidence theory, for example. In this connection it is perhaps worth quoting the results of the empirical study by J. K. Butters and Ralph Lintner, *The Effects of Taxes on Growing Business* (Boston, Harvard University, 1945), p. 2:

"High corporate taxes restrict the growth of small companies: (a) By greatly reducing the attractiveness of risky expansions to the managements of small companies; (b) By curtailing the amount of capital available from retained earnings to finance such expansions; and (c) By making the acquisition of outside capital on satisfactory terms much more difficult."

[12] *E.g.*, the greater-than-fifty-per cent stock ownership criterion of the SEC and the ninety-per cent criterion of the federal tax laws have alike been found inadequate. No better alternative has been devised despite much effort. The point need not be labored; it is evident to all who have attempted to formulate statistical indices of business concentration.

[13] The latter alternative is, of course, one variant of what E. A. G. Robinson in *The Structure of Competitive Industry* (London, Nisbeth & Co., Ltd., 1932), Chap. VIII, describes as "rushing the pessimum."

Footnote 10, *supra*, also describes an alternative which Reder does not discuss. Persons do go into business to make profits and are willing to take risks for the sake of greater profits.

[14] Or to avoid difficulties arising from the possibility of maintaining, say, cash constant via borrowing, indices of quick or current ratios to sales, profits, etc., may be computed.

which may then be combined into a single preference function:

$$q(t) = F[M(t), \pi(t)]. \tag{3}$$

Now the entrepreneur may wish to explore the neighborhood of his equilibrium values, or he may be subjected to certain "shocks" or "errors." To analyze his behavior in the neighborhood of equilibrium the following function is constructed:

$$q(t+1) = f[M(t), \pi(t)]; \tag{4}$$

In words, output at time $(t+1)$ is dependent on cash position and profit position at time t. In contrast to (3) which represents a desired or satisfactory position, (4) may be depicted as representing actual position. The two equations may then be combined, and for equilibrium, or stationary values, the following result obtains:

$$\Delta q(t) = q(t+1) - q(t) = f - F = 0. \tag{5}$$

Numerous types of curves and forms of behavior about equilibrium may be analyzed with the aid of this equation,[15] but attention will be restricted to a few cases of special interest.

Oscillatory and Non-Oscillatory Behavior of the Individual Firm

There are two basically different types of (stable) business behavior: oscillatory and non-oscillatory.[16] As is perhaps obvious, the distinction will turn on whether cash and profit position move together when output varies. Both cases are presented in the following graph[17]:

In this diagram (Figure 1) points AA and BB represent points of equilibrium in the sense that $q(t) = q(t+1)$ and F, the desired position,

[15] Equation (5), it will be noted, is a general form of difference equation in which a variable at one point in time is made a function of the same or other variables at another point in time. Professor Samuelson has analyzed, mathematically, a similar equation. See *Foundations of Economic Analysis* (Cambridge, Harvard University Press, 1947), pp. 302 ff. As he notes, it yields all of the qualitatively different types of behavior about equilibria points.

[16] These may be further subdivided into stable, unstable, and neutral behavior. In the interest of simplicity and compactness attention will generally be restricted to stable cases.

[17] Technically, it is the derivatives which are of interest. Monotonic stability is yielded by

$$0 < \frac{d\pi}{dM} < -\frac{\dfrac{\partial F}{\partial M} - \dfrac{\partial f}{\partial M}}{\dfrac{\partial F}{\partial \pi} - \dfrac{\partial f}{\partial \pi}} = \frac{D^q_M}{D^q_\pi}\,.$$

Oscillatory stability is yielded by $0 > (d\pi/dM) > (D^q{}_M/D^q{}_\pi)$. In these equations $d\pi/dM$ is the total rate of increase of π with a given increase in M. $\partial F/\partial M$ and $\partial F/\partial \pi$ represent the desired marginal cash and profit requirements of production, while $\partial F/\partial M$ and $\partial f/\partial \pi$ represent the actual requirements. Their differences, represented by $D^q{}_M$ and $D^q{}_\pi$ may be called "displacements" of actual from desired position; of course, actual may exceed or be less than (or equal to) desired. In general, then, stability is achieved or not according to whether

consists of a 45° straight line through the origin.[18] The two curves, f_1 and f_2, represent paths of actual movement. Thus, if a displacement to the right to, say, $q(t_0)$ occurs, it will be seen that actual cash position is

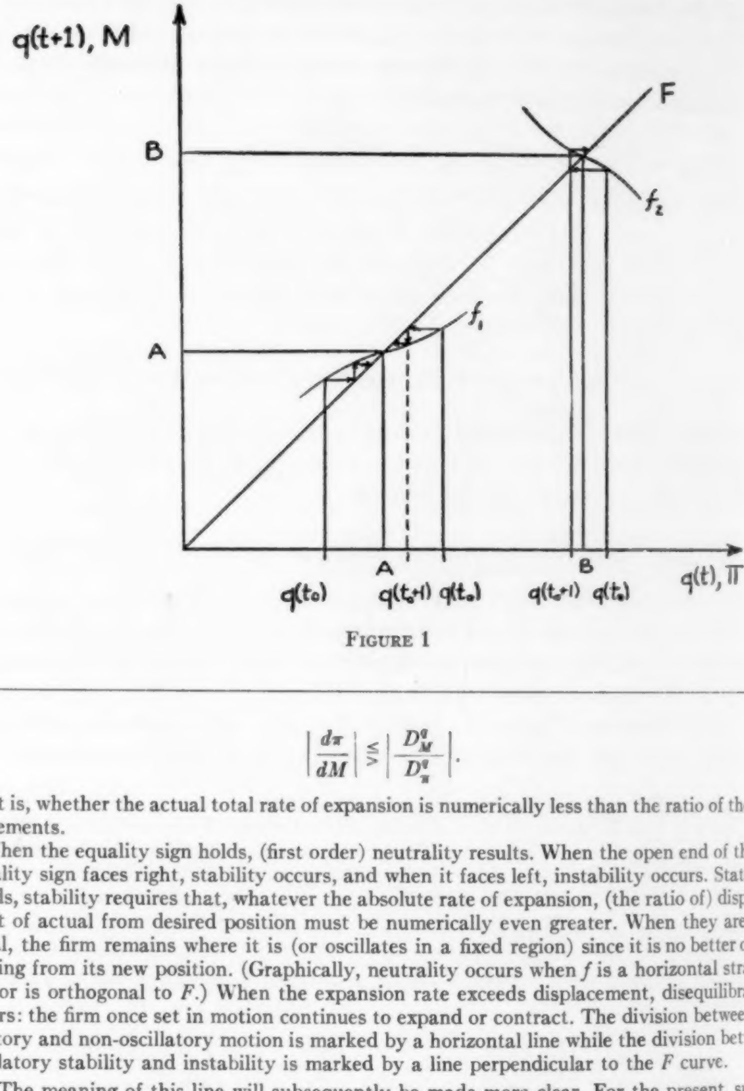

FIGURE 1

$$\left|\frac{d\pi}{dM}\right| \lesseqgtr \left|\frac{D_M^q}{D_\pi^q}\right|.$$

That is, whether the actual total rate of expansion is numerically less than the ratio of the displacements.

When the equality sign holds, (first order) neutrality results. When the open end of the inequality sign faces right, stability occurs, and when it faces left, instability occurs. Stated in words, stability requires that, whatever the absolute rate of expansion, (the ratio of) displacement of actual from desired position must be numerically even greater. When they are just equal, the firm remains where it is (or oscillates in a fixed region) since it is no better off on moving from its new position. (Graphically, neutrality occurs when f is a horizontal straight line or is orthogonal to F.) When the expansion rate exceeds displacement, disequilibration occurs: the firm once set in motion continues to expand or contract. The division between oscillatory and non-oscillatory motion is marked by a horizontal line while the division between oscillatory stability and instability is marked by a line perpendicular to the F curve.

[18] The meaning of this line will subsequently be made more clear. For the present, suffice it to say that it not only presents the principles involved most simply but that F also has this shape and position by virtue of the definition of equilibrium adopted—*i.e.*, $q(t+1)=q(t)$. This definition which is most closely allied with statics is, of course, arbitrary. It would be possible to define equilibrium as existing when $q(t+1)=kq(t)$, where k is some constant; or, more generally, $q(t+1)=\gamma[q(t)]$. The latter definitions would be more appropriate to dynamical systems where equilibrium is moving through time.

below the desired (viewed vertically) while actual profit position is above desired (viewed horizontally) for this level of output.[19]

Along f_1 both cash position and profit position would be more satisfactory (at this level) for output $q(t_0+1)$ and so adjustment is undertaken in the direction indicated by the arrow. The firm is, however, constrained to move along f_1 and so when $q(t_0+1)$ is reached, the situation is still unsatisfactory (although in less intense form) and further contraction is undertaken until equilibrium is reached again at AA. If the equilibrium point is overshot to $q(t_0)$ on the left, then profit position is unsatisfactory while cash position is more than satisfactory. Expansion will then occur until AA is reached. Thus, an actual path of the type f_1 is stable on both sides with one-way equilibrating motion occurring in both directions.

Turning to the f_2 curve, a displacement to $q(t_0)$ may again be visualized as occurring to the right of the equilibrium point BB. This level of cash and profit position is not appropriate to $q(t_0)$ but rather to $q(t_0+1)$ at the left of BB. As adjustment is effected to this level, however, the entrepreneur finds himself in a more favorable position and expansion occurs. With diminishing oscillatory movements, return to equilibrium is thus effected.

It is worth while now to try to analyze the economic factors that seem to lie behind these movements. It will be noted that in both cases, cash position fell below the desired level at $q(t_0)$. For the f_1 curve, upon displacement to the right of equilibrium, cash position decreases relatively but increases absolutely; for the f_2 curve, cash position decreases both relatively and absolutely. An economic interpretation of these phenomena of the following character is suggested: One-way stability occurs in the f_1 case because the absolute increase in cash position with expanded output allows the firm, despite its relative decrease in cash position, to adjust its output step by step to a satisfactory level. When both an absolute and relative decrease in cash position occurs, the firm is forced to make a more violent adjustment in an effort to restore its liquid position. The firm thus contracts beyond its point of equilibrium; with the relative and absolute increase in cash position it may then expand beyond the equilibrium point and recoup its profit position. And

[19] With the assumptions implied by linearity, and uniqueness of the F curve, this can be interpreted to mean that stability implies that profit position increases at a less rapid rate than cash position multiplied by a proportionality factor. For $(\partial F/\partial\pi)=(\partial F/\partial M)=1$, and, if we choose $\left(\frac{\partial f_1}{\partial M}\right)=1/k$ at a point $q(t_0)$, then $\left(\frac{\partial f_1}{\partial \Pi}\right)=k$; these two slopes are orthogonal. Thus, we have $0<(d\pi/dM)<(1/k)$, or, $d\pi<(dM/k)$. The weighting factor, $1/k$, is yielded by the rate of increase of cash position; its reciprocal, k, is the profit weight. Stability then implies that $k<1$, neutrality that $k=1$, and instability that $k>1$. This is merely another way of stating that stability requires that the actual rate of increase must be less than the desired. (The signs, incidentally, are reversed when $k<0$.)

so on. The firm constantly exchanges cash for profit position, via oscillations in output, until equilibrium is restored.[20]

What cases in the real world are likely to correspond to these types of behavior? It is impossible to answer this question without exhaustive empirical investigation.[21] The world of theory, however, suggests certain cases. In many textbook discussions, at least, a sharp distinction is drawn between the theory of the bank and the business firm.[22] As noted at the outset, one distinction lies in the direction of profit-maximizing and liquidity-preserving behavior. Another distinction, which is not always articulated, is that the theory of the business firm is presented in terms of equilibrium analysis while the theory of the bank is presented primarily as a disequilibrating process. Few, if any texts, discuss the behavior of the bank in the vicinity of equilibrium.[23] It is fairly obvious, then, that both discussions must be reduced to the same common denominator before comparisons can be drawn. This may, perhaps, best be done by investigating the behavior of these two types of firms in the neighborhood of equilibrium.[24]

[20] Numerous other cases can be visualized by drawing appropriate curves. The firm may upon contraction beyond equilibrium find itself still unable to restore its cash position and further contraction occurs; on the other hand, the increase in cash position may be so large as to allow it to move forward to a new (ultimate) position of equilibrium, etc. Both stable and unstable and combined cases can easily be constructed. Moreover, the analysis can be conducted from the profit side (by reversing the axes of M and π), but the principle will remain unaffected.

[21] The cash sales of certain types of "credit" sellers, which seem to occur with relative frequency, at least in certain types of retailing, seem to give evidence of oscillatory behavior. It is not possible to tell with certainty, however, whether such sales merely represent sharp trading practice.

[22] In what follows it should be understood that it is the main outlines of formal theory that are being discussed rather than such theory as modified and qualified by particular teachers or research personnel. Such persons may make substantial modifications in their use of textual material. Conversations with numerous economists have convinced me that the above presentation is probably, at most, a presentation of these modifications in more systematic form than is, perhaps, ordinarily done.

[23] This is, perhaps, too strong a statement. Some texts note, for example, that a bank is required (or desires) to maintain its reserve ratio "on the average" rather than "at every moment of time." This implies, it should be noted, oscillatory behavior. As the bank reduces its reserve position below requirements, it increases its profit position, then, above the "equilibrium" level. If it is to maintain its reserve position "on the average" it must then contract its output (loans) and hence its profits below the equilibrium level at another point in time. Few, if any, texts proceed then to analyze whether such behavior is stable. It seems to be generally assumed that fluctuations will continue about this "equilibrium" and that no shift in "equilibrium" will occur.

[24] It should be noted (*cf. supra*, footnote 19) that the ordinary bank-type expansion formula can be derived from the equations that have been posited. Thus, we have $d\pi \geqq (dM/k)$ (the inequality sign is reversed for $(d\pi/dM)<0$) where $1/k$, the weighting factor is obviously related to the reserve requirements via the rate of expansion. (It should be noted that $1/k$ changes as movement along f occurs.) While little discussion of the relation between loans and profits can be found in the textbooks it seems fair to assume that profits are proportional to loans (output). Thus, we have $d\pi = c\,dq$ where c is the constant of proportionality. Upon

substitution in the above formula, and eliminating the inequality sign at equilibrium (*i.e.*, viewing equilibrium as neutral—or, alternatively, by multiplying by a large enough factor to eliminate the inequality) we obtained: $dq = (dM/k)$.

It may be of interest to present the diagrammatic picture (Fig. 2) as follows:

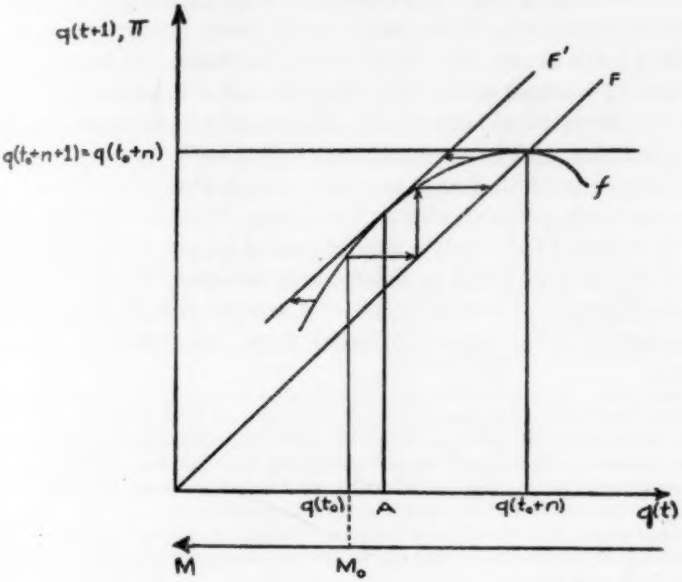

FIGURE 2

Assume that the bank begins at $q(t_0)$ with cash position M_0 in excess of requirements. (It should be noted that M is here drawn in the reverse direction since it is generally assumed that M decreases as output expands.) The bank will then, as indicated by the arrows, move along the f curve until equilibrium is reached. Trouble, however, arises at two points: $q(t_0+n)$ and A. At $q(t_0+n)$ profits are maximized but this implies then that the bank at equilibrium is independent of its cash position. In a narrow sense, this may create no particular psychological or logical difficulties since this result holds only at a point, and only if it be insisted that absolute profit maximization occurs here. Ordinarily this difficulty is avoided by choosing a particular K—by some averaging process or by some institutional device—and avoiding discussion of profit maximizing behavior. Actually this assumption (sometimes stated as the assumption that the firm has access to an infinite cash balance at the going rate of interest in markets in which it buys) is used in discussion of the business firm. It is obviously inapplicable to banks.

No particular difficulty occurs for business firms, but ultimately the size of any business firm is determined via diminishing proportions as long as a fixed factor is assumed in the analysis. No such limitation is present for banks. Practically, the point may be of small interest since, in the United States at least, ready-made institutional limitations lie at hand. Nevertheless, throughout stretches of history and, indeed, in parts of the contemporary world no such institutional restrictions exist. On special assumptions, the principle of increasing risk may be brought into play to limit the size of the individual bank. In general, however, both statistical and administrative reasons point in the opposite direction.

Point A is also of interest since for the right-hand member of the inequality it yields the indeterminate form 0/0. (*I.e.*, at this point, $(\partial F/\partial\pi) = (\partial f/\partial\pi)$ and $(\partial F/\partial M) = (\partial f/\partial M)$.) It is, of course, the point where disequilibration ceases and equilibration begins. An economic significance may be attached to this point for it also offers an alternative choice to the entrepreneur. He may be interested in maximizing his position relative to requirements. (This, it

Various writers have attempted to distinguish between bank-type and business-type firms.[25] Business-type firms may be said to receive at least partial cash payment for the sale of goods. When this happens, the absolute size of their cash position may increase even though the relative position falls. When such is the case, monotonic stability (or instability) will occur. The peculiarity of a bank—at least of the text-book variety—seems to be that what it sells is cash for which no cash payment is received at time of sale. This results in absolute deterioration of cash position, and hence oscillatory behavior.[26]

The requirement that cash position reduce absolutely as well as relatively may perhaps be viewed as too strong. This condition may be now relaxed. It proves to be only a special case of a more general phenomenon in which liquid and profit position move inversely when referred to the common sequence of desired points.[27] A simple case illustrating the type of movements to be expected under these conditions is presented in Figure 3.

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will be seen, implies that he alters his choice of weights as to the relative importance to be attached to cash and profit position.) When this is done, only one-sided stability is manifested. (This may be seen by shifting the F curve downward to the F position, which may be done since it is the movements rather than the particular point values which are of interest.) Movement to the right results in contraction toward equilibrium; movement to the left results in one-way further contraction. It is this type of behavior which some writers may have in mind when they state that the banks may be "too stable" downward—*e.g.*, when they are trying primarily to protect their cash position.

[25] *Vide*, J. R. Hicks, *Value and Capital*, p. 241: "Every business has, at any moment, a certain amount of claims against it, which it may be called upon to meet at dates which cannot be quite certainly predicted. The clearest case of this is, of course, the case of banks, which live by acquiring such liabilities and therefore have an exceptional amount of them." Since Hicks does not discuss the subject further, it is difficult to ascertain what distinction he is attempting to draw. Does he mean that banks have exceptionally low quick or current ratios? This is clearly not the case. Many types of business display lower ratios and other types display, of course, higher ratios. As for individual business ratios, it is impossible to generalize. But many businesses must display considerable variation in their financial ratios over the years. If Hicks is referring only to the absolute size of current liabilities, his statement would make it difficult to draw comparisons between firms.

[26] As will be remembered, it is stable *equilibrium* analysis which is of primary interest. Oscillatory unstable behavior may be thought of, perhaps, in terms of a stock market plunger or an old fashioned investment bank. At one point of time cash is largely tied up in security issues which are then liquidated (including seasoning operations) and a new process of expansion begun, assuming successful operations. Thus the activity results in constantly expanding interchanges between profit position and cash position as the firm continues to grow. (Since output, loans, also oscillates, growth must be measured, say, by total assets.)

[27] The sequence of points need not, however, be common in the sense of coincident. In Figure 3, a single straight line is used for purposes of simplicity in illustration. Equation (4) may be decomposed into:

$$q(t+1) = f_1[M(t)] \quad \text{and} \tag{6}$$

$$q(t+1) = f_2[\pi(t)]. \tag{7}$$

Similarly, equations (1) and (2) may be solved to yield:

$$q(t) = \phi^{-1}[M(t)] \tag{8}$$

In this case the profits curve, π, and the liquidity curve, M, are drawn on opposite sides of the curve of desired positions, F. Thus π is more than satisfactory (at a given output) and indicates further expansion while M is less than satisfactory (at a given output) and indicates contraction. At $q(t_0)$ the level of liquidity attained would be satisfactory at the output level indicated by the arrow A; the profit level is that indicated by the arrow B. The two opposing forces then yield a compromise solution indicated by the arrow AB for output level $q(t_0+1)$. Output is expanded. The process might be described as the profit force prov-

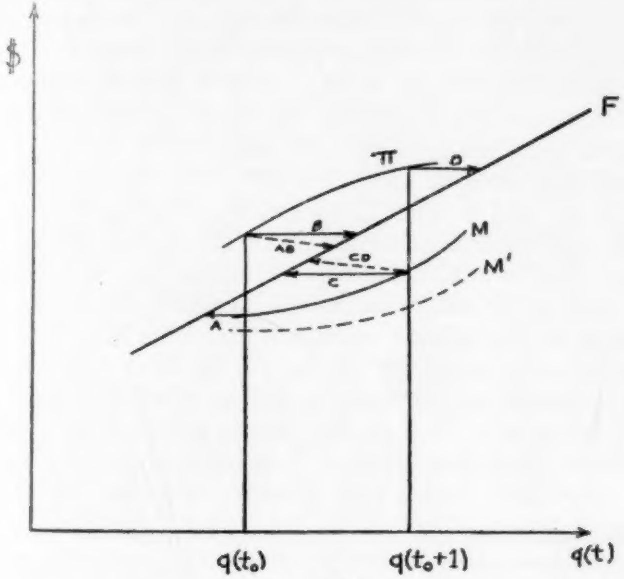

FIGURE 3

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(9) $$q(t) = \psi^{-1}[\pi(t)].$$

Upon combining (6) and (8), and (7) and (9), differencing and then differentiating the following two equations are obtained:

(10) $$\frac{dM}{dq}\left(\frac{\partial f_1}{\partial M} - \frac{\partial\phi^{-1}}{\partial M}\right) \lesseqgtr 0$$

(11) $$\frac{d\pi}{dq}\left(\frac{\partial f_2}{\partial \pi} - \frac{\partial\psi^{-1}}{\partial \pi}\right) \lesseqgtr 0.$$

These equations may then be combined (with due regard to the inequality signs) to yield:

(12) $$0 \lesseqgtr \frac{d\pi}{dM} \lesseqgtr \frac{\dfrac{\partial\phi^{-1}}{\partial M} - \dfrac{\partial f_1}{\partial M}}{\dfrac{\partial\phi^{-1}}{\partial \pi} - \dfrac{\partial f_2}{\partial \pi}}.$$

The formal (qualitative) properties of this equation are the same as the one used previously.

ing relatively more powerful than the liquidity force and hence resulting in expansion despite the risk to control retention that is implied.

At the new output level, $q(t_0+1)$, the strength of the forces is now reversed. C, the liquidity arrow is now longer than D, the profit arrow. The firm thus contracts in an attempt to restore its cash position, as indicated by the arrow *CD*. (Having achieved a high enough level of profit, it might be said, the profit drive is weakened since the opportunity for larger profits decreases relatively while the incentive toward increased liquidity is strengthened. Liquidity considerations become dominant.) Thus, the firm proceeds by oscillating movements to a point (if it exists on the time path) where the opposing forces exactly cancel. Upon displacement the oscillatory process again occurs.[28]

At this point it is perhaps worth pausing to note that the traditional textbook approach does imply that the bank-type firm is one in which cash position and profit position move inversely. In the neighborhood of equilibrium they move on opposite sides of the desired (required) position and hence tend to result in oscillatory behavior. This observation may be of some importance for the policy conclusions frequently drawn about the control of bank behavior and stabilization of economic behavior. The usual policy recommendations for raising reserve requirements and engaging in open market operations may then have the opposite results from those intended. By driving the banks to equilibrium (or beyond), such policies may actually engender instabilities by stimulating oscillatory behavior on the part of the banks and (through a process akin to sympathetic vibrations) transmit these behavior patterns to the entire economy. Instability rather than stability may therefore result.[29] Of

[28] The arrows drawn in the chart and the description given above are only approximately accurate, but sufficient for qualitative purposes. More strictly, if π and M be described as the curves of total profits and liquidity (rather than their derivatives), it is both the distance and the rates of change which are of interest. The process might be visualized diagrammatically something along the following lines. At the initial point draw the tangents to the curve. This determines the gradient. The magnitude and direction of the vectors may be then determined as follows: draw circular arcs from the radius (at the point of tangency) of length equal to the distance from the actual to the F curve. When the actual curve, π, lies above the F curve, turn the radius about the point of tangency upward to the right; when the actual, M, lies below the F curve, pivot the radius downward to the left. The intersection of the circular arcs with the tangents then determine the length and direction of the vectors. The resultant may then be computed.

It should then be noted that equilibrium requires not only that the tangents to the two actual curves be equal but also that, at such a point, the curves must also lie equidistant from F. In general, such conditions will probably not be met so that firms subject to inverse movements of π and M will engage in continuing oscillatory behavior.

[29] I have not yet analyzed completely the precise conditions under which stable business-type and stable bank-type behavior will, when combined, result in unstable aggregate behavior. It would seem, however, that two conditions are necessary for the emergence of instability despite the stability of the banking and business sectors. These conditions are (1) that the bank-type firms should be trading (borrowing and repaying) with each other and (2) that the bank-type firms should be dominant in the sense that the preponderant volume of business is conducted by them. (Bank-type firms are not necessarily coincident with legally defined banks.)

the two approaches (raising reserve requirements and open-market operations) the latter is the more likely to yield instability since it will tend to (1) draw down reserves of bank-type firms and (2) force business-type firms into bank-type behavior. The second of these two results is accomplished because the drawing down of the money supply while, say, the firm is expanding will force liquid position to move in the opposite direction to profit position even in cases where such results would not "naturally" have happened.

Another aspect of stabilization control frequently adverted to in economic literature is tax policy. In so far as the above remarks with respect to maintenance of liquidity position and monetary policy are applicable, they must enter into tax considerations as well. For taxes must, in general, be paid in cash. Thus, it may be that the theory of incidence and shifting of taxes on business profits also requires reconsideration. In so far as liquidity considerations enter into business policy, it seems clear that the time paths, if not the ultimate positions of equilibrium, will be affected. But even the positions of ultimate equilibrium may be affected. Thus in Figure 3, the M' curve represents the shift in the M curve which follows the imposition of a progressive tax on the firm's profits—the π curve. For bank-type firms, the case seems clear.[30] But even business-type firms concerned with maintenance of liquidity position will display similar effects. Thus in Figure 1, a proportional tax on profits which must be paid in cash will shift the f_1 curve vertically downward and hence alter the position of equilibrium. If a progressive tax is levied, the curve will not only shift position but change shape. Thus, the impact of the tax may also alter the basic pattern of behavior of the firm—from one-way to oscillatory movement.

Liquidity Position and the Theory of the Business Firm

Rather than pursue further the policy implications of the introduction of liquidity and control maintenance considerations into entrepreneurial decision-making, it may be of interest to examine the possible correspondence with more traditional treatments. Although it is difficult to ascertain precisely what assumptions are made with respect to liquidity position and control maintenance in business-firm theory, there are certain theorems which will, if analyzed, permit of more or less valid conjectures. For example, it is usually assumed that under profit maximizing behavior "the firm" will proceed to where $d\pi = 0$. Further-

The above approach may also contain suggestions for phases of the economic aggregation problem. By building the monetary variable in at the micro level it becomes possible to pass with relative ease to the macro level. Incidentally, the above approach suggests that turning points in business cycles, when banks have reached equilibrium reserve positions, would be marked by turbulence rather than the smooth downturns posited by some writers on cycles.

[30] This should not be interpreted to imply that writers, on tax shifting, have argued that taxes on bank profits, which must be paid in cash, are not shifted.

more, it is usually assumed that $d^2\pi < 0$. With the aid of diagrams, the implications of these conclusions for liquidity position and control maintenance may, perhaps, be analyzed.[31]

[31] The mathematical analysis of these higher order stability conditions becomes quite involved. Samuelson (*op. cit.*, p. 306) has provided an exhaustive mathematical analysis which makes repetition superfluous. What is involved, may, however, be seen with the aid of Figure 4.

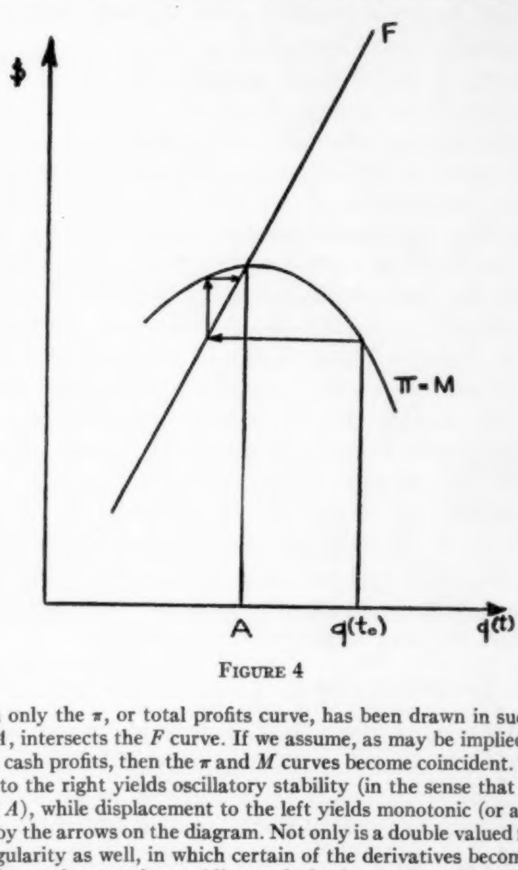

FIGURE 4

In this diagram only the π, or total profits curve, has been drawn in such a way that the maximum point, A, intersects the F curve. If we assume, as may be implied by some writers, that all profits are cash profits, then the π and M curves become coincident. The case is stable; but displacement to the right yields oscillatory stability (in the sense that the adjustment is then to the left of A), while displacement to the left yields monotonic (or asymptotic) stability—as indicated by the arrows on the diagram. Not only is a double valued function involved, but a point of singularity as well, in which certain of the derivatives become zero and others become infinite. The maximum point at A lies on the horizontal line which divides one way and oscillatory behavior. Moreover, there are various points of neutrality which yield $f' = F'$ or $f' = -F'$ which divide stable from unstable behavior

$$\left(\frac{d\pi}{dM} = \pm \frac{D^q_M}{D^q_\pi}\right).$$

Finally, if it be assumed that either f' or F' equals zero, then

$$\frac{d\pi}{dM} = -\frac{\dfrac{\partial f}{\partial M}}{\dfrac{\partial f}{\partial \pi}} = -\frac{\dfrac{\partial F}{\partial M}}{\dfrac{\partial F}{\partial \pi}},$$

Although the first order condition, $d\pi=0$, results in no particular difficulties, the second order condition, $d^2\pi<0$, may yield oscillatory rather than monotonic behavior. This is not what might be expected from the smooth adjustments ordinarily posited in the theory of the firm.

The concept of control loss through unsatisfactory profit position, although not perhaps as sharp as might be desired, can be fairly handled within the usual theory of the firm. It is the concept of control loss, through unsatisfactory liquid position that offers the most difficulty. That control loss can occur from this direction seems to be a fact of business experience beyond dispute. Not only small, but large business firms have been subjected to this danger, if not actual experience.[32]

In Figure 5, an attempt is made to bring these various features together in a form which seems to approximate ordinary theory. Along the horizontal and vertical positions are plotted profit and cash position, π and M. On opposite axes are plotted risk of control loss through π and M which are assumed to decrease (increase) as π and M increase (decrease). The q_1 and q_2 curves represent various combinations of cash and profit positions which can be obtained for a fixed output position—*e.g.*, q_1—under different policy arrangements affecting price and credit terms, selection of customers, etc. The diagram is plotted so that $q_2>q_1$; *i.e.*, the larger subscript indicates the larger output.[33]

Reading from the upper right-hand corner, the I curves represent indifference curves which descend in level proceeding outward from the origin.[34] Thus I_1 represents a lower level of indifference than I_2.

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or the marginal rate of expansion is equal to the ratio of the desired and actual marginal rates of transformation. Presumably in the usual theory these are all zero so that either or both the numerator becomes zero (implying that both actual and desired rates are independent of cash position at equilibrium) and the denominator becomes infinite.

If it be assumed that both

$$\frac{d\pi}{dq}=0 \quad\text{and}\quad \frac{dM}{dq}=0 \quad\text{then}\quad 0 \lesseqgtr \frac{d^n\pi}{dq^n} \lesseqgtr \frac{D_M^q}{D_\pi^q}\,\frac{d^nM}{dq^n};$$

in this form a proportionality—at equilibrium—between profit and cash position rates of increase is established. It is not possible to analyze this equation further in this article. The case,

$$\frac{d^2\pi}{dq^2}<0<\frac{D_M^q}{D_\pi^q}\,\frac{d^2M}{dq^2},$$

yields oscillatory rather than monotonic stability.

[32] In bankruptcy reorganization cases, cash considerations have frequently proved decisive. The old "upset" price was a species of this phenomenon as well as the hard bargains that stockholders interests were able to drive on occasion. Even the revised federal bankruptcy statutes have not adequately handled the difficulty.

[33] These levels are determined from a three dimensional surface with π and M plotted on the horizontal axes and q on the vertical axis. More generally, since π and M, as functions of q, would not reach their maxima at the same levels, crossing over of the q curves would occur.

[34] The linearity of these curves implies that the entrepreneur views risk of control loss through M and π as perfect substitutes.

Assume now that the entrepreneur finds himself at a point P on q_1. By moving along q_1 (by changing his price and payment policies) he may thus move to higher levels of indifference. The highest level he can achieve with this output is π_0, M_0, where q_1 is tangent to I_1, and which may thus be labeled a point of equilibrium. The equilibrium is, however, unstable; the slightest displacement along I_1 allows the entrepreneur to move along a new, and greater, q curve, to an even higher level of indifference. At the point of intersection with q_2, for example, the entrepreneur may then move along q_2 to I_2, and so on, until he reaches the maximum possible level of indifference which his own operating conditions and risk preferences make possible. The E curve thus represents the sequence of equilibrium points.

Movement, as output expands, is thus oscillatory between π and M, although output position is monotone (never decreasing). Even though output position may be the same as that posited by simple profit-maximizing behavior, the price (or other business policies) may well be different.[35]

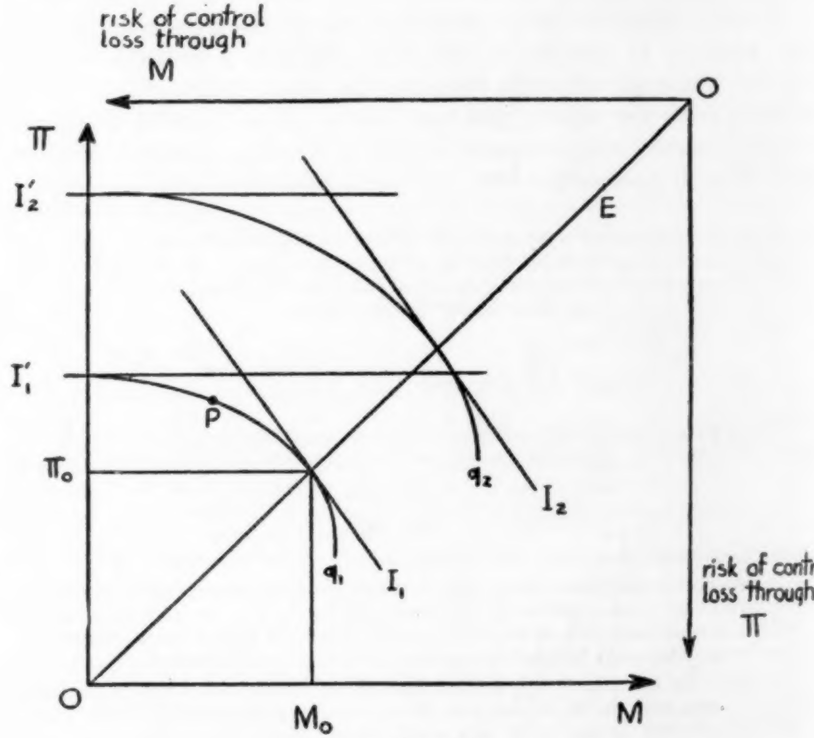

FIGURE 5

[35] The output position may also be different, especially if crossing over, as would generally happen, were allowed between the q curves. Even in the simple case utilized here, it should be noted that a tax on profits payable in cash would alter the shape of the q curves—generally at every point except at $M=0$.

I_1' and I_2' represent indifference curves which are independent of liquid position and hence of risk of control loss through deficiencies of M. This case may be thought of as corresponding more closely to the usual theory. But again behavior is oscillatory: the firm moving from P along q_1 up to I_1' and then to a new output level and a higher indifference curve.[36] The whole oscillation appears, however, in M; both π and q are monotonic (never decreasing). Increased cash position may be required (or an inevitable consequence of) expansion, but once π is maximized, the entrepreneur—*e.g.*, through an appropriate withdrawal policy—need maintain only a zero cash position. It is these cash oscillations which are not ordinarily described in business firm theory.

The entrepreneur may, of course, be independent of cash position in another sense which can be shown by making the I curve coincident with the π axis. Although this implies that the entrepreneur is then independent of risk of control loss through π as well as M, a valid interpretation is nevertheless possible. The firm may be viewed as moving "instantly" to its maximum position.[37] Since it occupies this position "instantly," the risk of control loss through π is fixed at every finite interval of time. Obviously, oscillatory movement in none of the variables occurs in this case.

Although it is difficult to disentangle precisely the assumptions that are ordinarily made concerning risk of control loss and liquid position, the above analysis may possibly serve to suggest what some of these assumptions may be.[38] At any rate, it seems worth while exploring the possibilities of introducing control and liquidity considerations more fully into the theory of business behavior.

Conclusion

Whatever the merits of the formal analysis presented in this paper, the quotation from the *Wall Street Journal* introduced at the outset, as well as the facts of everyday business experience suggest that liquidity position and control considerations are of great contemporary impor-

[36] The actual path followed cannot be determined without further assumptions—*e.g.*, as to the entrepreneur's "hurry" to reach his maximum π.

[37] This may perhaps be referred to as the "stationary" case and the preceding one as the "static" case. In neither case will a cash tax affect the ultimate position, although it may affect the path of movement in the "static" case.

[38] If q_2 is assumed as yielding maximum π, then further output expansion will cause the q curve to recede—*i.e.*, the maximum profit position will have been passed on the q axis in the three dimensional diagram noted in footnote 33. Crossing over will almost certainly occur. If it be assumed, however, that over the relevant range, the relative overexpansion results in a curve q_1' coincident with q_1 then the entrepreneur will be at the same level of indifference on both curves. His most easily made adjustment is thus to q_1. The process might be viewed somewhat as follows. Having overexpanded he attempts first to achieve optimum returns from this output by adjusting his price and credit policies. As a result of these policies, he finds (perhaps in a manner analogous to Marshall's "spoiling the market") that he would be equally well off by contracting his output to q_1. After doing so, he may then expand back to his maximum position.

tance in deciding business conduct. That these notions also possess historical significance is suggested by the following quotation from R. H. Tawney's ***Religion and the Rise of Capitalism***:[39]

> The grievances which supplied fuel to social agitation, which evoked programs of social reform, and which prompted both legislation and administrative activity, sprang, not from the exploitation of a wage-earning proletariat by its employers, but from the relation of the producer to the landlord of whom he held, the dealer with whom he bought and sold, and the local capitalist, often the dealer in another guise, to whom he ran into debt. The farmer must borrow money when the season is bad, or merely to finance the interval between sowing and harvest. The craftsman must buy raw materials on credit and get advances before his wares are sold. The young tradesman must scrape together a little capital before he can set up shop. Even the cottager who buys grain at the local market, must constantly ask the seller to "give a day." Almost everyone, therefore, at one time or another, has need of the money-lender. And the lender is often a monopolist—"a money-master," a malster or corn monger, "a rich priest," who is the solitary capitalist in a community of peasants and artisans. Naturally, he is apt to become their master.

[39] (Pelican Books ed., 1947), p. 30.

TAXES, SAVING, AND INFLATION

By James Tobin

During the postwar inflation in the United States, Professor Sumner Slichter proposed a reduction of personal income taxes on the portion of income saved.[1] The immediate objective of the proposal was to encourage individual saving as a means of fighting the inflation. In addition, Professor Slichter believes it to be social wisdom to devote a larger share of full employment national income to saving and investment. To this end he offered his plan as a permanent feature of the tax system. This suggestion was enthusiastically seconded by Professor David McCord Wright,[2] both because he favors more saving and investment and because he believes the long-run prospects of the economy are inflationary.

As an anti-inflationary weapon, the plan has the great advantage of being politically painless.[3] Conventional anti-inflationary measures are never popular. But this proposal offers taxpayers, instead of an increase in income tax rates, a reduction in their tax liability. Indeed, Professor Slichter claimed that cutting tax rates during the inflation in 1948 would be harmless if accompanied by his proposal.[4]

The plan is to permit the taxpayer to exclude his saving, or some fraction thereof,[5] from his taxable income. Saving would be a "deduction," like charitable contributions or medical expenses. From the individual taxpayer's viewpoint, the plan is equivalent to replacing part or all of the income tax by a tax on his consumption expenditures.[6]

[1] S. Slichter, "The Problem of Inflation," *Rev. Econ. Stat.*, Vol. XXX, No. 1 (Feb., 1948), p.5, and "Tax Formula: for Savers, Lower Levies," *New York Times Magazine*, January 25, 1948. The argument that the income tax should not apply to saved income has a long history, which, together with a vigorous espousal of the thesis, may be found in Irving Fisher and H. W. Fisher, *Constructive Income Taxation* (New York, 1942).

[2] D. McC. Wright, "Inflation and Equality," *Am. Econ. Rev.* Vol. XXXVIII, No. 5 (Dec. 1948), p. 895.

[3] *Cf.* Slichter, "Tax Formula," *loc. cit.*

[4] *Ibid.*

[5] Professor Slichter suggests one-third.

[6] For a taxpayer with positive saving, the relationship between an income tax with saving exempted and a spending tax is as follows: Let Y be the taxpayer's income before taxes, C his consumption expenditure, S his saving, and R his tax liability. $C + S + R = Y$. Under conventional income taxation, R is a function of Y, $R(Y)$. Under the Slichter proposal, $R = R(Y - bS)$ where b is the fraction of saving permitted to be exempted

Thus the Slichter proposal is closely related to the expenditures tax advocated by Wallis and Friedman as a wartime measure.[7] But while Wallis and Friedman proposed to combat inflation by temporarily adding an expenditures tax to the existing income tax, Slichter proposes to replace permanently the existing income tax, or part of it, by a tax on consumption.

How effective would exemption of saving from taxation be in weakening inflationary pressure? The privilege would certainly raise the amount of saving forthcoming from any given level of income before taxes. But saving may be increased at the expense either of taxes or of consumption. Substitution of saving for tax payments is of no help in a fight against inflation; it may even be a step backwards. Giving consumers a larger cushion of accumulated savings may strengthen their propensity to consume in subsequent years. Moreover, substitution of saving for taxes means that more government obligations are outstanding; and these obligations are actually or potentially bank reserves under present monetary arrangements. Professor Slichter argues that the availability of more current saving by individuals would facilitate the transfer of resources from consumption to investment without the necessity of bank credit expansion.[8] But if government expenditures are independent of tax receipts, any saving which merely replaces taxes will be matched by an increase in the government's demand for loanable funds. The needs of government and business to borrow from the banks will be undiminished, and the ability of the banks to meet these demands will be enhanced.

Therefore, if the plan is to realize its objectives, it must result in substitution of saving for consumption as well as for taxes. In evaluating the effects of the proposal on consumption, a temporary privilege of deducting saving must be distinguished from the permanent in-

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from taxation. This implies $R = R(Y - bY + bC + bR)$. That is, R depends implicitly on income Y and consumption C. If $b = 1$—all saving is freed from taxation—R depends only on C and the income tax is converted completely into an expenditures tax. The function $R(Y)$ is, under a progressive rate structure, a connected series of line segments of increasing slope. For taxable income in a range $Y_{n-1} < Y < Y_n$, the marginal tax rate $R'(Y)$ is a constant, r_n. Suppose that $R'(Y - bY + bC + bR) = r_n$. Then the marginal tax rate with respect to income is $(r_n - r_n b)/(1 - r_n b)$. The marginal tax rate with respect to consumption is $r_n b/(1 - r_n b)$.

The two plans differ in their treatment of dissaving. Under the Slichter proposal, dissavers would not be penalized; whatever their consumption, their tax would depend only on their income. Under a spending tax, dissavers, like everybody else, would pay taxes based on their consumption, regardless of their income.

[7] W. A. Wallis, "How to Ration Consumers' Goods and Control Their Prices," *Am. Econ. Rev.* Vol. XXXII, No. 3, Pt. 1 (Sept., 1942), pp. 501-12. Milton Friedman, "The Spendings Tax as a Wartime Fiscal Measure," *Am. Econ. Rev.*, Vol. XXXIII, No. 1, Pt. 1, (Mar., 1943), pp. 50-62.

[8] "Tax Formula," *loc. cit.*

corporation of this feature in the tax system. The plan has a better chance of reducing the propensity to consume out of income before taxes if it is regarded as temporary than if, as its proponents advocate, it is expected to be permanent. A principal motive for saving is provision for future consumption. The force of this motive is weakened if future consumption spending is expected to be taxed at the same rate as current consumption.

Even if the measure is understood to be temporary, its effectiveness is doubtful; consumer demand corresponding to a given level of personal income before taxes may even be increased. The deduction privilege is in effect a lowering of the price of saving in terms of income and consumption. Instead of costing one dollar of consumption, a dollar of saving costs one dollar less the tax deduction attributable to it. (If r is the applicable marginal income tax rate and b is the fraction of saving eligible for deduction from taxable income, the cost of a dollar of saving is $1 - br$ dollars of consumption.) Now lowering the price of saving has both substitution effects and income effects. The substitution effects are unfavorable to consumption. But any taxpayer who would save in the absence of the special incentive is given, under the proposal, an increase in disposable income equal to the tax on the deductible part of his normal saving. The increase in disposable income is favorable to consumption. There is no *a priori* way to decide whether the substitution effects or the income effects will predominate. But a measure which has income effects favorable to consumption is a weak method of fighting inflation.

Moreover, there are two features of the plan which limit its restrictive effects on consumption. First, the deduction privilege does not alter the price of dissaving. To qualify for tax relief, dissavers would have to cease dissaving and start saving. Short of a drastic revision of their budgets, the plan gives dissavers no incentive to reduce their consumption. Nor does it force them to consume less by imposing on them higher taxes. The plan could touch dissavers only by including a penalty for dissaving at the same rate as the bonus for saving. A penalty provision probably would not be acceptable on social and political grounds.

Second, due to the progressive structure of tax rates, the more a taxpayer saves the less he can gain by reducing his consumption further. His saving is excluded from the taxable income on which his marginal tax rate depends. Enough saving can move him to a bracket with a lower marginal tax rate. A taxpayer who would save in the absence of the plan gets a boost in his disposable income based on the marginal tax rate applicable to his taxable income before deduction of saving. His normal saving may be sufficient to move him to a lower

tax bracket. When he considers whether to increase his saving at the expense of his consumption, his calculations are made at a lower marginal tax rate, *i.e.*, a higher cost of saving. Consider, for example, a lowest-bracket taxpayer whose deduction for normal saving lowers his taxable income beyond the reach of the income tax. The deduction privilege gives him an increase in disposable income, some of which he may devote to increased consumption, but it offers him no incentive to substitute saving for consumption.

The difficulties due to varying marginal tax rates could be largely avoided by computing the tax deduction for saving in a different manner from the deductions now allowed. Instead of a deduction from taxable income, the privilege could take the form of a credit against tax liability computed by applying a uniform rate to the taxpayer's saving. Except for taxpayers with sufficient saving to reduce their tax liability to zero, the cost of saving to an individual would be independent of the amount of his saving.

The reduction in the price of saving in terms of income and consumption accomplished by the proposed tax revision is analogous to a general rise in interest rates. Both the deduction privilege and an increase in interest rates enable a saver to have larger funds at his disposal in the future for the same sacrifice of current consumption. Both increase the amount of future consumption which can be obtained with a given current income. Economic opinion has been uncertain and divided concerning the effects of interest rate changes on consumption and saving. Empirical evidence is inconclusive, and the current fashion is to attribute to interest rates little or no influence on the disposition of income. It is true that the tax proposal can accomplish much bigger changes in the price of saving than the usual range of variation of interest rates. On the other hand, a rise in interest rates does not suffer from the special features of the tax device which limit its effectiveness in inducing substitution of saving for consumption.

It is by no means certain, therefore, that the Slichter plan would restrict consumption spending even if it were regarded as temporary. The proposal has even less chance of achieving its anti-inflationary objective if it is expected to be permanent. This expectation will in no way weaken the income effects of the tax deduction privilege, which are favorable to consumption. But it will substantially weaken the substitution effects. Consider a taxpayer whose expectations of income and tax rates place him in the same marginal tax rate bracket in the future as today. Suppose that, in the absence of tax incentives, he plans to save in future years about the same amount he is currently saving, nearly enough so that deduction of saving from taxable income would not put him in a different tax bracket in the future. A temporary

exemption of saving from taxation might induce him to shift to the present some of the saving he had planned to do in the future and to postpone consumption. He would thereby avoid permanently tax payments on the increase in his current saving. But if the exemption of saving from taxation is permanent, the taxes are not avoided but only postponed. If the taxpayer shifts consumption from today until tomorrow, he adds to his future tax liability exactly what he deducts from his taxes today. Indeed, due to the progressive tax rate structure, he may add more to his future tax liability than he gains from tax exemption in the present. An increase in future consumption might carry the taxpayer into a higher tax bracket, because he would have less saving to deduct from future taxable income. Or a decrease in present consumption might take him into a bracket with a lower marginal tax rate.

For some taxpayers, whose income prospects and consumption and saving plans are not uniform over time, permanent exemption of saving from taxation could lead to a reshuffling of consumption and saving plans. But this reshuffling can work both ways; present consumption can be increased as easily as reduced. If a taxpayer expects to face different marginal tax rates in different years, the scheme gives him an incentive to shift his consumption to years when he expects to be in low tax brackets. Similarly the absence of a penalty for dissaving may lead to concentration of consumption spending in years when dissaving is planned anyway. For example, a taxpayer who anticipates dissaving when he retires will not increase his taxes in the years of retirement by planning to consume more at that time. He will receive current tax benefits by reducing his present consumption; consequently, for him the plan reduces the cost of future consumption in terms of present consumption. On the other hand, an individual who is currently dissaving in anticipation of higher future incomes which will permit him to save adds nothing to his current taxes and reduces his future taxes by dissaving more now and planning to save correspondingly more in the future.

A by-product of the scheme, whether adopted temporarily or permanently, would be to change regressively the size distributions of disposable income, wealth, and possibly consumption. Big savers in the high-income groups would receive increases in disposable income, while low-income families with zero or negative saving would not. To the extent that the high-income groups save their gains, inequality of wealth is promoted. If the beneficiaries increase their consumption, even the distribution of consumers' goods is altered against the low-consumption groups who receive no advantage from the tax reduction. The regressive features of the plan would diminish its political appeal,

one of the principal advantages claimed for the proposal, and might well increase inflationary pressure due to wage demands. Regressive effects could be lessened by placing a ceiling on the allowable deduction of saving or by varying the fraction of saving eligible for deduction inversely with the amount of saving claimed. But these provisions would also diminish, in the same manner as the progressive structure of tax rates, the incentive for substituting saving for consumption.

By a more fundamental revision, the Slichter proposal can be made both more effective against inflation and less regressive. Tax rebates would be allowed not for all saving but only for additions to the taxpayer's normal saving. This revision eliminates the perverse income effects; tax relief would be obtainable only by curtailing consumption. The economic meaning of "normal saving" is the amount the taxpayer would save given his income before taxes and given the tax law without the rebate provision. No legal formula can do more than approximate the economic meaning. A possible approximation would be a schedule of normal saving for tax purposes, determined by the government. Based on family budget data, the schedule would relate normal saving to income, number of dependents, and perhaps to other factors. The taxpayer could claim deduction only for saving in excess of the figure in the schedule applicable to him.

Such a schedule—or any other legal formula for normal saving, such as the taxpayer's saving in some previous year—is bound to overstate the normal saving of some and understate that of others. These inevitable errors reduce the anti-inflationary effectiveness of the plan. Taxpayers whose normal saving is understated will receive a windfall, with income effects favorable to consumption. Taxpayers whose normal saving is significantly overstated are unlikely to change the disposition of their incomes. Like the dissavers considered above in the analysis of the original proposal, they must take an unrewarded cut in consumption before they can begin to claim tax rebates for further cuts. The plan could be made certain to affect all taxpayers by including a penalty tax for under-saving as well as a tax deduction for oversaving.

To summarize, tax rebates for all saving are not a reliable method of restricting consumer demand and stopping inflation. They are especially ineffective if they are expected to be a permanent feature of the tax system. A temporary plan to exempt saving from taxation can be strengthened by confining the exemption to saving in excess of some normal amount. It can be further strengthened by penalizing taxpayers who save less than normal amounts as well as rewarding those who save more. Even with these amendments, the proposal requires for its success a high degree of substitutability between present

and future consumption. And the amendments spoil the spectacular, if illusory, political appeal of a proposal which promises to stop inflation by reducing taxes.

The quest for anti-inflationary medicine which is both effective and palatable is, nevertheless, an important one. What means of restricting the consumption of a taxpayer to a given level will deprive him of the least satisfaction? This question is surely relevant to an appraisal of anti-inflationary tax measures, even though it is not to be expected that the constituents of political appeal can be discovered in the economic theory of consumer preference.

An answer to the question requires assumptions concerning the taxpayer's preferences. The following assumptions are made: (1) Given his level of current consumption, the taxpayer prefers more future purchasing power to less; (2) Given the terms of exchange of present consumption for future purchasing power, the taxpayer will both consume more and save more the higher his current disposable income; (3) To leave the taxpayer at a given level of satisfaction, it is necessary to provide him with increasing amounts of future purchasing power for every additional dollar of current consumption of which he is deprived.

We exclude from consideration measures which would involve a net gift by the Treasury to the taxpayer, either in cash or in government obligations.

Clearly the best way of restricting consumption to a given level, from the taxpayer's standpoint, is the one which leaves him the most saving to go along with that consumption. Also, the taxpayer will be better satisfied with this solution the greater the future value of the saving. Consequently, he will prefer a temporary measure, which will not restrict or tax his future disposition of the saving, to a permanent measure.

By this standard, a temporary expenditures tax—which amounts to the same thing as an income tax with saving exempted—is superior to an income tax. If each is levied at the rate necessary to induce the taxpayer to restrict his consumption to a given amount, the expenditures tax will leave him with more saving. This follows from the fact that the expenditures tax can take advantage of whatever substitutability there is between present and future consumption, while the income tax must rely wholly on income effects. In Figure 1, saving is measured on the vertical axis, and consumption on the horizontal axis. I_1, I_2, I_3 are indifference curves embodying the assumptions stated above concerning consumer preferences. Curve X is the locus of points of tangency of indifference curves with line of slope -1. Y on each axis represents the consumer's income before either of the taxes under con-

sideration. Point A shows the consumption and saving chosen by the consumer. C is the level of consumption to which he is to be restricted. An income tax would accomplish this restriction by moving him to point B, where a line parallel to YDAY would be tangent to an indifference curve. An expenditures tax will be represented by a line which starts on the saving axis at Y and has a steeper slope than YDAY. The slope will be steeper the bigger the tax. (A progressive expenditures tax would be shown by a broken line convex upwards.) The expenditures tax which will induce the taxpayer to consume only C will be shown by a line tangent to some indifference curve at a point directly above C. Now the indifference curve through D has a slope at D steeper than -1, while the indifference curve through B has a slope at B equal to -1. The expenditures tax line through B has a slope steeper than -1, while the line through D has a slope equal to -1. Therefore there is a point K, between B and D, where an expenditures tax line YKE touches an indifference curve I_2. Thus an expenditures tax leaves the taxpayer better off than an equally effective income tax.

Neither of these measures, however, is as satisfactory to the taxpayer as a suitably designed compulsory savings levy. The major weakness of an ordinary compulsory savings plan is that the assets which consumers are forced to acquire are good substitutes for assets which they already own or would voluntarily acquire. Consequently, consumers damage their financial position very little by maintaining their consumption and reducing their voluntary saving or, if necessary, dissaving. This weakness can be avoided by a levy in return for which government obligations are issued only if the taxpayer's saving meets a specified standard. If the taxpayer cannot show the required amount of voluntary saving, the levy on him is simply an income tax.

A compulsory savings scheme with teeth can limit the taxpayer's consumption and give him the rest of his income in saving. This can be accomplished, for example, by levying a tax equal to CY in Figure 1 and by giving the taxpayer government bonds equal to the tax provided his dissaving during the year is zero. The line showing the alternatives open to the taxpayer is YDCH, and the best choice he can make is point D. Here he is better off than under an expenditures tax or income tax which holds him to the same consumption. On our assumptions, which imply some substitutability between present and future consumption, the same result can be achieved by a smaller levy (FY). In this case eligibility to receive government bonds would require positive saving equal to CF, the difference between income after the tax and the given consumption level. The alternatives open to the taxpayer lie along the line YDGJ. The tax must be large enough so that the line GF lies below I_3, the indifference curve through D. The important

feature of compulsory savings schemes of this type is to give the taxpayer no intermediate choice; either he keeps his consumption down and commutes his tax payments into bond purchases or he fails to save the required amount and pays the tax in full without recompense.

In practice a compulsory savings levy of this kind would not supersede the existing income tax but would be added to it when an inflationary situation warranted. Complete conversion of the income tax into a compulsory savings scheme would change regressively the distribution of income after taxes and of wealth. It would also provide the public

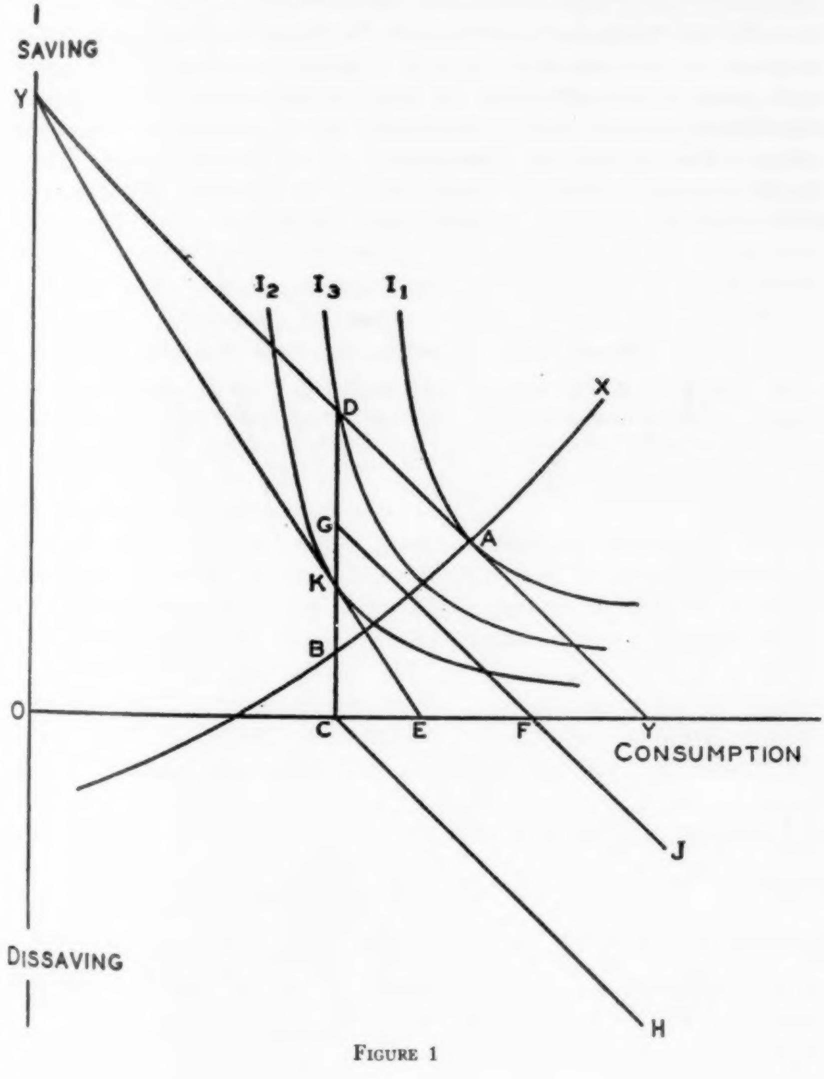

FIGURE 1

with an accumulation of assets which might prolong inflationary danger.

For the purposes of this plan the government would have to determine a schedule of the voluntary saving which taxpayers must perform in order to be eligible to receive government bonds in return for their tax payments. Together with the schedule of tax rates, this schedule would determine the levels of consumption to which the program would seek to hold taxpayers. The schedule should, therefore, be based not only on income but on number of dependents.

Administration and enforcement of a compulsory savings levy with teeth, or of an expenditures tax, or of rebates for saving would be complicated by the requirement that the taxpayer declare and be able to prove the amount of his saving.[9] The taxpayer would have to show such data as net purchases or sales of securities, changes in bank deposits, changes in indebtedness, changes in cash value of insurance policies. For the anti-inflationary purposes of these schemes, "saving" would have to exclude purchases of houses and other durable goods. Care would be required to prevent taxpayers from claiming capital gains, realized or unrealized, as saving. Administration of any of these plans would be difficult both for the tax collector and the taxpayer, but the information demanded and the problem of checking its accuracy are not basically different from the requirements of existing tax legislation.

[9] This subject can only be mentioned here. For an optimistic view of the administrative feasibility of such a requirement, see K. E. Poole, "Problems of Administration and Equity under a Spending Tax," *Am. Econ. Rev.*, Vol. XXXIII, No. 1, Pt. 1 (Mar., 1943), pp. 63-73. For the opposite view, see H. H. Villard, "Monetary Theory," *A Survey of Contemporary Economics* (Philadelphia, 1948), p. 343.

DISCRIMINATION IN INTERNATIONAL TRADE

By FRANKLYN D. HOLZMAN*

I. *Introduction*

Economists concerned with international trade problems have been divided as to the advisability of the use of discrimination in the administration of quantitative restrictions[1] in the present period, a period in which the structure of trade is disrupted, partly because of the destruction which accompanied World War II and partly reflecting tendencies which had their roots in earlier periods. The discussions of discrimination which took place at the London, Geneva, and Havana meetings of the International Trade Organization apparently reflected this division of opinion.[2] The hostility of many economists toward discrimination undoubtedly stems from experiences of the 1930's when it was used by Germany, for example, to exploit the nations in its economic sphere. In addition, American economists can hardly fail to be influenced in their thinking by the fact that at present U. S. commercial interests constitute one of the principal targets of discrimination. On the other hand, many economists, particularly those from Western Europe, feel that the outlawing of discrimination would lower the level of, and benefits from, trade unnecessarily for many years to come.

The Havana Charter reflects a compromise between these views—what might be considered a grudging sanction of the use of discrimination by those nations having balance of payments difficulties. It is provided that members of the ITO may introduce discrimination under either of two sets of conditions:

1. They may choose to discriminate "... in a manner having equivalent effect to restrictions on payments and transfers for current international transactions which that Member may at that time apply

* The author is a graduate student fellow, Russian Research Center, Harvard University. In the writing of this paper, he acknowledges benefit from the critical comments of Mrs. Barbara Solow and Mr. Robert Lichtenberg.

[1] Hereafter to be designated discrimination in distinction to simple price discrimination which will be so labelled whenever it is used.

[2] Clair Wilcox, *A Charter for World Trade* (New York, 1949), p. 90: "The negotiations through which these provisions were fashioned were among the most protracted and most bitterly contested at each of the conferences. Latitude for discrimination during the transition period was sought by the UK and by France. Rules to circumscribe discrimination were urged by the United States."

under Article XIV of the Articles of Agreement of the International Monetary Fund. . . "[3] In other words, discrimination is allowed to the extent to which members of the IMF would be discriminating already. It would have been difficult for the ITO to have ruled otherwise with respect to Fund members. Article XIV of the Fund appears to allow a fairly wide latitude for discrimination during the transition period.

2. Alternatively, members who signed the Geneva Protocol may elect to be governed by Annex K which allows discrimination subject to the following, among other, limitations:

> 1 (a) (i) levels of delivered prices for products so imported are not established substantially higher than those ruling for comparable goods regularly available from other Member countries . . . and that
> 1 (a)(iii) such action does not cause unnecessary damage to the commercial or economic interests of any other Member. . . .[4]

In view of the severity of the present trade crisis[5] some economists may consider these criteria somewhat too restrictive of the right to discriminate. Their reasoning will become apparent in light of the discussion which follows.

The Anglo-American Financial Agreement takes a much firmer position toward discrimination, outlawing its use, with minor exceptions in U.S.-U.K. trade.[6]

It should also be noted that although a nation may discriminate under the Charter while in balance of payments difficulties, "balance of payments difficulties" is not an independent variable but is a function

[3] Article 2 (Exceptions to the Rule of Non-Discrimination), *Havana Charter For an International Trade Organization,* March, 1948. See Section 1 (b), p. 59. Dept. of State reprint, pub. no. 3206, Commercial Pol. Ser. 114.

[4] *Ibid.*, pp. 60, 127.

[5] Particularly when these provisions were being discussed.

[6] Section 9 states: "If either the Government of the United States or the Government of the United Kingdom imposes or maintains quantitative import restrictions, such restrictions shall be administered on a basis which does not discriminate against imports from the other country in respect of any product; provided that this undertaking shall not apply in cases in which (a) its application would have the effect of preventing the country imposing such restrictions from utilizing . . . inconvertible currencies accumulated up to December 31, 1946, or (b) there may be special necessity for the country imposing such restrictions to assist, by measures not involving a substantial departure from the general rule of non-discrimination, a country whose economy has been disrupted by war, or (c) either government imposes quantitative restrictions having equivalent effect to any exchange restrictions which that government is authorized to impose in conformity with Article VII of the . . . International Monetary Fund. . . ." The exceptions do not appear very substantial: the first may have been of short-run value but it is doubtful that it remained operative beyond, say, 1948; the second appears designed to aid, not the discriminator, but third countries—and then only those which suffered war disruption, thereby excluding, for example, most of the sterling area; the third, by the nature of Article VII (the "scarce currency" clause), is likely to operate with considerable lag and, in fact, up to the present time has not been invoked in spite of the severity of the dollar problem.

of a number of alternative policies which may be pursued. In fact, much of the future battle over discrimination may well be fought over other issues such as exchange rate devaluation, internal fiscal and monetary reform, or the use of other "blunt" controls in place of discrimination. It clearly would be inconsistent to argue for devaluation or some other measure or combination of measures as a *complete* solution to present balance of payments difficulties and at the same time also support discrimination in the present period.

Few would deny that discrimination might be undesirable under "normal" conditions of trade.[7] However, in view of the disagreement as to the desirability of its use under conditions of the postwar transition period, it would appear useful to spell out some of the issues involved. An attempt will be made to define discrimination in a meaningful manner with respect to current problems, indicate some of its underlying assumptions, and the consequences of its application under different sets of conditions.

II. *Characteristics of Non-Discrimination*

Non-discrimination is characterized by the following:

1. "No prohibition or restrictions shall be applied by any Member on the importation of any product of any other Member *or* on the exportation of any product destined for any other Member country, unless the importation of the like product of all third countries *or* the exportation of the like product to all third countries is similarly prohibited or restricted. . . ."[8] In other words, all restrictions on imports or exports are to be applied proportionally to all nations concerned.[9]

2. Imports and exports apparently are treated separately by the ITO.[10] The Anglo-American Financial Agreement is concerned only with import restrictions.[11] The implication of this is that both imports and exports must necessarily be considered with respect to exchange for currency. In other words, the concept of non-discrimination apparently is based on price[12] and is not concerned with commodity terms of trade.

[7] Abstracting from dynamic considerations such as development of backward areas.

[8] *Havana Charter, op. cit.*, Article 22, Section 1, p. 57. The italicizing of *or* is my own to emphasize characteristic 2 below.

[9] See for example A. O. Hirschman, "Disinflation, Discrimination, and the Dollar Shortage," *Am. Econ. Rev.*, Vol. XXXVIII, No. 5 (Dec., 1948), pp. 886-91. He gives an example of how non-discrimination would work: ". . . Britain restricts purchases of books from Australia and of tobacco from Kenya . . . because the dollar shortage forces it to limit book and tobacco import from the U.S. . . ."

[10] *Havana Charter, op. cit.*, Article 22, Section 1, p. 57.

[11] See footnote 7 above.

[12] The term "price" is used here, and will be used in the remainder of this paper, to include all commercial considerations such as quality, transportation cost, etc.

3. In practice a nation accused of discriminating could clear itself by proving that it is purchasing in the lowest price market (or selling in the highest price market).[13]

Two aspects of discrimination deserve special mention.

First, it is not a purely quantitative restriction, but as indicated above, is defined with respect to price.

Second, partly as a result of this fact, there is a tendency to assume that discrimination in international trade is identical with domestic price discrimination. This viewpoint results in a blurring together of two quite different types of discrimination in international trade which we shall designate for the present: Type 1 and Type 2.

It will be recalled that the traditional monopolist (monopsonist) discriminating with respect to price, would separate his markets according to their elasticities of demand (supply), selling as dearly (buying as cheaply) as possible. Let us compare this operation with the two types of discrimination.

Type 1: Let A place quantitative restrictions on imports from B, but not from C. According to our definition, A importers would be paying a higher price for imports from C than the same commodity would cost in B (or they would not be discriminating). It could be argued that by placing quantitative restrictions on imports from B, but not from C, A is providing the separation of markets necessary to allow C exporters to price discriminate against its own importers. Type 1 discrimination is seen to be the inverse of traditional price discrimination.

Type 2: Although the application of the concept is clearly stated in terms of price, and consideration of export and import discrimination are handled separately, it may still be reasoned that commodity terms of trade are implied. It might be claimed that A has forced its importers to purchase at a higher than competitive price from C as part of a bargaining process designed to obtain a more than compensating premium on its exports to C.[14] This is the mechanism usually associated with the sort of bilateralism practiced by Germany in the 1930's. This operation is not identical with traditional price discrimination since it involves both imports and exports. Nevertheless, A is the analogue, in real terms, of the price discriminator.[15]

It will soon be apparent that the distinction between the two types of discrimination is a fundamental one.

[13] See, for example, Annex K, Section 1 (a) i quoted above.

[14] Or perhaps other economic, military, or political advantages.

[15] The relationship between A and C is perhaps better described as a bilateral monopoly in which one party (A) is stronger than the other (C).

III. *Rationale of Non-Discrimination*

Let us examine the conditions under which a policy of non-discrimination would be economically desirable.

Let us assume that the international market is characterized by flexible prices and exchange rates, convertibility of currencies, national parameters (*e.g.*, income, marginal propensity to consume, marginal propensity to import, etc.) of magnitudes such that trade is in balance, and generally competitive conditions. It is well known that under these conditions each nation will be "... somewhere on the Edgeworthian contract curve...."[16] These points represent optimum efficiency in the sense that no further gains are possible to one nation which would not be at the expense of another.

Let us suppose that for economic, military, or political reasons, discriminatory quantitative restrictions have been imposed by a nation to prevent its traders from dealing equally freely in all markets. The immediate consequence would be a movement off the contract line for several of the nations. If these restrictions remained in force sufficiently long, a reallocation of the resources serving international trade might occur which (considered statically) could be considered less efficient than the distribution which existed when all nations were on the contract line. It can be argued that prompt enforcement of a policy of non-discrimination would tend to restore trade to its *original* "efficient" pattern. This is undoubtedly part of the economic rationale behind the non-discrimination clauses of the ITO, the Anglo-American Financial Agreement, and behind the reasoning of other economists of this school. *It should be noted that discrimination in this case would be Type 2 described above.* A nation would not force its importers, under the conditions assumed, to purchase at a higher price than necessary unless compensating advantages on the export side were expected

If we had started with simple monopoly, instead of competition, as our original pattern, equilibrium would not have been represented by a point on the contract curve. This position would therefore be considered "inefficient" since the satisfaction level of either party could be raised without detriment to the other. Nevertheless, the monopolist would be better off than under competition; and of course the other party worse off.

If the monopolist should decide to discriminate, there would be a tendency for equilibrium to be moved to a point nearer the contract line than under simple monopoly, falling on it in the case of perfect discrimination. The position of the monopolist would be improved again

[16] P. A. Samuelson, "Welfare Economics and International Trade," *Am. Econ. Rev.*, Vol. XXVIII, No. 2 (June, 1938), p. 265.

whereas the other party would be placed on a still lower satisfaction level.[17]

Since equilibrium under perfect monopolistic discrimination and perfect competition are both represented by points on the contract line and therefore are both "efficient," competition would appear preferable to perfect discrimination principally from the point of view of "distributive justice." Since simple monopoly is "inefficient," "distributive justice" must also be the criterion of those who prefer it to discriminating monopoly. "Distributive justice," therefore, would appear to be a second facet of the rationale of non-discrimination in international trade. Because of the impossibility of interpersonal welfare comparisons (in this case international comparisons),[18] economic science has had nothing to say on this matter in spite of its great importance.[19]

Discrimination is frequently objected to on the ground that it leads to bilateralization of trade, hence to a reduction in the benefits from trade due to loss of specialization. This will be true, as is well known, to the extent that the demand (supply) curves facing the discriminator are inelastic. Obviously if the demand for the discriminator's exports should be elastic in the markets in which he chooses to sell, competitors selling the same commodities or substitutes could cut in on his business.[20] In this respect the discriminator in international trade is limited to the same extent as the domestic price discriminator.

It is interesting to note that given the same degree of inelasticity domestically and internationally, the setting in which international discrimination is practiced differs from domestic discrimination in an important respect which serves to make bilateralism a *noticeable* concomitant of the former but not of the latter. International discrimination, particularly when state-inspired as is often the case today, usually involves a large number of commodities in each market—in comparison with domestic discrimination. On the assumption that the imports of any country have a limited expansibility, it follows that the value of the commodities sold to a nation on a discriminatory basis may be a relatively large percentage of its total imports. In extreme cases this may actually involve a cessation of trade between the country trading with the discriminator and some third nations. Since accounts in international trade are kept on a country-by-country basis this fact, *i.e.*,

[17] Under perfect discrimination, the second party would be at the lowest possible satisfaction level at which exchange could take place.

[18] The writer is aware of the theoretical shortcomings of community indifference lines.

[19] For an excellent graphic and verbal presentation of the competition-monopoly-discriminating-monopoly problem, see: W. Leontief, "The Pure Theory of the Guaranteed Annual Wage Contract," *Jour. Pol. Econ.*, Vol. LIV, No. 1 (Feb., 1946), pp. 76-79.

[20] Abstracting from the various economic and political devices used by discriminators to reenforce their positions.

bilateralization, becomes statistically recognizable. Although the same phenomenon exists domestically, it occurs on a relatively small scale and is not easily defined statistically.

Clearly, maintenance of the highest possible degree of specialization is a third aspect of the rationale of non-discrimination under the assumed conditions.

It should be noted that the preceding analysis is based on an assumption of constant output. It has been demonstrated, however, that under certain conditions output may be increased by discrimination.[21] If output should be increased sufficiently by discrimination, it is possible that everyone's position might be improved. To the extent that this should happen, the case for non-discrimination would be weakened.

IV. *Rationale of Discrimination*

Let us change some of our assumptions and examine the results. Specifically we will assume relatively fixed exchange rates and/or inflexible prices, national parameters such that trade is unbalanced, and inconvertibility of some currencies (largely as result of the preceding assumptions). These assumptions are not unreal under present conditions of world trade.

Under the conditions assumed, a soft currency nation may no longer allow its traders to buy or sell indiscriminately with regard to country (or currency) but must insure that certain of its international monetary accounts balance bilaterally (abstracting from capital movements). Let us suppose A has a deficit on current account with B and a surplus with C, and that B will not accept C's currency in settlement of its account with A. Let us furthermore suppose that A is buying identical commodities from B and C and that B's price is lower than C's. When A has exhausted its stock of B currency, it may impose quantitative restrictions on imports from B in order to achieve bilateral balance. These restrictions are discriminating within the ITO definition of the term. *But—it should be noted that this is Type 1 discrimination.* There is no necessary presumption in this case that A is paying more for its imports from C in the expectation of compensation in the form of a higher price for its exports to C, military or political gains, etc. A may be buying from C only because it no longer has the currency with which to purchase from B. *Type 1 discrimination is seen to be of*

[21] Joan Robinson, *Economics of Imperfect Competition* (London, 1945). In her section on price discrimination, Mrs. Robinson demonstrates that if a monopolist is faced with separate markets of different demand elasticities, and if the more elastic demand curve is more concave than the less elastic demand curve, ". . . the total output will be greater under discrimination than under simple monopoly . . ." (p. 193). Her analysis also indicates ". . . that on the whole it is more likely that the introduction of price discrimination will increase output than that it will reduce it . . ." (p. 201).

an "induced" nature in distinction to Type 2 which is practiced at the initiative of the discriminator and may be designated "autonomous" discrimination.

The principal importance of the distinction between induced and autonomous discrimination resides in the fact that whereas with the former, disequilibrium in trade precedes and is the cause of discrimination, with the latter, discrimination is not a result of disequilibrium but is used deliberately by the nation discriminating to better its terms of trade or obtain other concessions at the expense of other nations. It was demonstrated above that enforcement of a policy of non-discrimination would make it possible to prevent an autonomous discriminator from separating his markets and thereby tend to restore trade to its original pattern. Application of this policy, however, to induced discrimination would not have the same therapeutic effect. It is well known that under the conditions assumed the induced discriminator could not return to the same level and distribution of trade which existed prior to discrimination. If balance of payments equilibrium could not be achieved by discrimination, downward adjustment of trade on a multilateral scale would become necessary. This would serve to reduce the benefits from trade to the discriminator and to all other nations with whom it might have enjoyed a higher level of bilateral trade by discriminating—and without benefit (at least in the short run) to the country discriminated against. It does not seem necessary to more than state that the losses from the reduced level of trade would be sufficiently large in most instances to transcend considerations of distributive justice and of the specialization effect.[22]

[22] As was indicated in the introduction, one of the principal purposes of this paper is to clarify the rationale of the use of discrimination in the transition period, particularly since the American delegations to the ITO and the framers of the Anglo-American Financial Agreement appear to have favored non-discrimination even under the conditions of transition.

The analysis would appear to be even more significant, however, in view of the fact that many economists feel that inconvertibility is a function solely of relative prices and can, therefore, be quite simply eliminated by "effective" devaluation. (See for example: F. Graham, "The Cause and Cure of 'Dollar Shortage'," *Essays in International Finance* [Princeton, 1948], p. 5.) If this were true, the case for induced discrimination in the present period would be refuted and discounts and premiums on currencies would be eliminated quite simply.

The elimination of inconvertibility, however, appears to be a much more complicated task, in some instances, than is generally assumed. For example, sterling inconvertibility is a function not only of (1) international price disequilibrium, but also of (2) the huge external sterling debt built up during the war, a sufficient proportion of which cannot be discharged quickly enough out of current production, (3) the shift in terms of trade between industrial and agricultural areas, (4) the increased marginal propensity to import resulting from the redistribution of income toward the poorer classes in the U.K., (5) and others. Achievement of immediate sterling convertibility would probably involve the U.K. in reduced home consumption and/or reduced domestic investment and/or repudiation of at least some portion of the external sterling debt. The consequences for the U.K. in terms of

It must be recognized that to defend a policy of non-discrimination with respect to induced discrimination at present or in the near future, especially in view of the immediate loss it would entail from a lower level of trade, it would be necessary to defend the particular distribution of trade which the policy tends to preserve, *i.e.*, the distribution of trade in some "... previous representative period, due account being taken of any special factors which may have affected or may be affecting the trade in the product. . . ."[23] This would indeed be difficult to do. The distribution of trade in the postwar period has been very abnormal because of war destruction and because of the large drawing down of liquid reserves by many nations and the extraordinary capital outflow from the United States in the forms of UNRRA, Marshall Plan and military lend-lease aid. For obvious reasons the wartime period is unfit to serve as a base period. The extraordinary structural changes which have been (still are) taking place since the interwar period[24] make it unwise to go back this far. In other words, there is actually no "representative period" upon which to base a policy of non-discrimination. This substantially vitiates the use of such a policy until the time when the current maladjustments in trade have disappeared.[25]

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the morale and incentive to work of its population, future ability to compete in world markets, domestic cost-price stability, and commercial relationships with its war creditors might be serious enough to endanger its recovery program. The alternative might be to tolerate inconvertibility until such time (perhaps 5-10 years) as productivity has risen, repressed inflation has subsided, agricultural prices have declined relatively to industrial prices, and other internal adjustments have ocurred which would make the transition to convertibility less fraught with danger. This latter alternative would not necessarily preclude devaluation sufficient to bring British export prices into line with world prices (this would probably not be sufficient to close the deficit on current dollar account, however) although the advisability of such a devaluation at this time is still a controversial matter.

For discussion of structural disequilibrium see: J. J. Polak, "Exchange Depreciation and International Monetary Stability," *Rev. Econ. Stat.* Vol. XXIX, No. 3 (Aug., 1947), pp. 173-82; P. A. Samuelson "Disparity in Postwar Exchange Rates, *Foreign Economic Policy for the United States*, edited by S. Harris (Cambridge, 1948), pp. 399-400.

[23] *Havana Charter, op. cit.*, p. 58.

[24] For example: full employment in many countries today in comparison with the depressed conditions of the 1930's, redistribution of income in some nations, development of synthetics, war destruction, etc.

[25] It is noted here that the ITO emphasizes the distribution, to the neglect of the level, of trade. Professor Frisch's trade matrix in its *unadjusted* form, goes to the other extreme, as Dr. Polak has indicated. (See his "Balancing International Trade: Comment," *Am. Econ. Rev.*, Vol. XXXVIII, No. 1 [March, 1948], pp. 139-41.) The matrix is essentially a balance sheet of current account relationships of each country with every other—in monetary terms. Apparently the marginal units of trade from all nations are treated as having equal desirability to all other nations ignoring the importance of the distribution of trade. Professor Frisch does state that ". . . In practice one would have to consider all sorts of special relations that connect the elements in a given trade matrix . . ." ("Forecasting a Multilateral Balance of Payments," *Am. Econ. Rev.*, Vol. XXXVII, No. 4 [Sept., 1947] p. 545). It is possible that such a procedure would meet the objection posed. It should also be noted that nowhere in the article was there any indication that adjustment would be made for

Finally, it should be noted that with currencies not freely convertible, and rigidities in international prices and exchange rates, some currencies will tend to be "harder" than others. Unless exchange rates and/or domestic prices fluctuate freely, a value expressed in international prices will not always be equivalent in all currencies. That is to say, although the real value of currencies in terms of each other (or gold) changes, the legal parities are not allowed to change freely. In this case, a country (or its traders) clearly cannot determine in which direction the most economic purchases can be made on the basis of market price expressed through parity rates. Consideration must also be taken of the current discounts or premiums on the currencies earned or held.

Let us suppose that A forces its importers to buy from C a commodity which is being sold by B at a 10 per cent lower price. Under the ITO definition of discrimination it could be claimed that A is discriminating against B. However, if C's currency exchanges at a 25 per cent discount with respect to its par value with B's currency, it is clear that A is not discriminating. Actually, the cost in currency of B's product is 20 per cent higher than C's; and, of course, cost in currency is the relevant measure under the assumed conditions. Any evaluation of discrimination should take this factor into account.

V. *Conclusions*

The following conclusions are suggested by the preceding analysis:

1. Autonomous discrimination may occur under conditions otherwise appropriate to multilateral trade. It is undesirable because it reduces the specialization effect and involves what may be considered an "unfair" distribution of the gains from trade. Enforcement of non-discrimination was seen to provide an adequate corrective. For these reasons it may be argued that a policy of non-discrimination should be enforced with respect to nations guilty of autonomous discrimination.[28]

2. This reasoning was shown to be inapplicable to induced discrimination because of the different set of conditions under which it occurs. Consequently, the ITO's general position of allowing discrimination in

discounts on currencies. (See next paragraph in text.) Other criticisms of the method have been published (see Dr. Polak's article above; also: G. M. Meier, "The Trade Matrix: Comment," *Am. Econ. Rev.*, Vol. XXXVIII, No. 4 [Sept., 1948], pp. 624-25).

However, in spite of its defects, Professor Frisch's work is very significant in that it attempts to answer the question: how to discriminate? and thereby facilitate progress in the recovery. The ITO, on the other hand, has made no contribution to this important problem of the transition period. Rather it has devoted its efforts to setting up rules for the post-transition period apparently on the assumption that transition problems will take care of themselves.

[28] Abstracting from certain dynamic considerations.

the use of quantitative restrictions during the transition period was shown to be justifiable on economic grounds. The limitations on discrimination imposed by Annex K of the Havana Charter do not appear to be justifiable by the same logic. If one accepts the reasoning that discrimination in the transition period is "induced" by structural disequilibrium in trade, then it may be contended that the characteristics of the induced discrimination will be determined by the nature of the disequilibrium, and should not be limited by arbitrary "price" and "quantity" criteria.

The exceptions to the non-discrimination clause of the Anglo-American Financial Agreement appear to be insubstantial and the clause, therefore, not defensible on economic grounds.[27]

3. If a policy of non-discrimination should be enforced during the transition period, it must be recognized that market prices in local currencies, converted at parity, do not provide a valid measure of relative cost. Currency discounts and premiums must also be taken into consideration if the policy is to have any economic significance at all.

4. The ITO has made no attempt to solve the problem of how to discriminate in the transition period. This is a serious gap since the problems of the transition are quantitatively so much more important than those of the post-transition period are likely to be. In addition, there is no guarantee that the present crisis may not continue in some sectors for many years.

Ideally the ITO should undertake, in cooperation with its members, extensive studies as to the optimum levels and distribution of trade to be expected at the end of the transition period. Discriminatory restrictions which are in consonance with, and necessary to the achievement of end-of-transition equilibrium should be allowed. It must be recognized that many nations are presently planning trade to a greater extent than ever before and with long-run ends in view. ITO coordination of the international aspects of this planning would be invaluable.[28]

[27] The events of July-August, 1947, showed the fallacy of the premature resumption of sterling convertibility under the terms of this same Agreement.

[28] A study of U.S. imports should have high priority on the list of research projects. The difficulties faced by foreign countries attempting to increase export to the U.S. are great. The U.S. is the most efficient and self-sufficient of nations. About two-thirds of its imports consist of food, and raw and semi-finished materials; half of the remainder, of manufactured consumer goods.

It is likely that imports of the former group can be increased much. Developments such as the invention of synthetic rubber, the improved tin-plating process, mechanization in beet sugar, etc., make it more likely that these imports will tend to decline relative to income. Studies show the U.S. elasticity demand with respect to the price of these commodities is very low.

The difficulties faced by foreign manufacturers trying to increase exports of consumer goods to the U.S. are great. The U.S. domestic industry is an efficient competitor in most existing lines (including close substitutes). Attempts to create new markets are almost

Less than ideally, the ITO might attempt to develop, or support efforts, in the general direction in which Professor Frisch has been working. Any mechanism which is clearly an improvement over current practice of unilateral discrimination should be incorporated into, and enforced by, the ITO.

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certain to have to face competition eventually from American emulators. For example, Professor Williams says that American automobile manufacturers have told him that if other nations succeed in establishing a market in the U.S., ". . . we will go after it. . . ." (J. Williams, "Europe After 1952," *Foreign Affairs,* April, 1949, p. 19). In those fields in which foreigners appear able to compete successfully with domestic firms, the U.S. provides high tariff protection. Foreign firms attempting to crack the American market always face the risk that tariff walls may be raised against them if they are "too successful"—although this risk may be substantially reduced by GATT and the ITO. It must also be remembered that the present allocation of resources to U.S. industries competing with foreign products is based on a long-standing policy of protection and cannot be easily changed.

In addition, American business men are more conversant with American tastes and more skilled than foreigners in the arts of advertising, packaging, styling, etc., for the American public. This raises the costs both of entry and of continued competition for foreign firms. Subsidies by foreign governments designed to overcome such handicaps, even initially, are infeasible since the Tariff Act of 1930 provides for the levying of countervailing duties to the full extent of such subsidies.

There is no question but that American goods have a higher utility for foreigners than the exports of any other country. Offsetting this, however, increased exports to the U.S. may be costly in view of: (a) poorer terms of trade which appear unavoidable (b) the costs of investment, advertising, etc., needed for better orientation toward dollar markets, and (c) risk of U.S. recession or higher tariffs and consequent loss of markets.

INTERNATIONAL ASPECTS OF A RECESSION

By Albert O. Hirschman*

The present paper is concerned with the end of the world-wide postwar inflation and with its implications for the "dollar shortage." In its first part, the stability of foreign economies will be examined, with particular reference to those of Western Europe. The second part deals with the probable consequences of a cyclical downturn for international economic equilibrium.

I. *The Stability of Foreign Economies*

Up to the middle of 1949, signs of a recession are fewer and less conclusive in foreign countries than in the United States. More and more countries, however, are achieving stabilization regardless of whether they have been suffering from the "open" or the "repressed" variety of inflation and also regardless of the kinds and the degree of control under which their economies have been functioning.

Incentives to invest have been particularly strong in all war devastated countries not only because of the large backlogs of consumer demand and the need for re-equipment in capital goods, but because relatively small amounts of investment (repairs of houses, railroads, replacement of damaged or outworn machinery) were sure to yield an exceptionally quick and high return. Once this abnormal demand for investment comes to an end, a rather severe readjustment may be expected. This type of readjustment did take place in 1947-48 in Italy where the completion of the most urgent repairs coincided with restrictionist monetary policies which killed the speculative, inflation-induced type of investment. The other marked instance of a postwar recession is Belgium where war destruction had not been important and where the government followed a policy of giving primary attention to the filling of consumers' needs.

Spotty evidence of slackening consumer buying has been available in most Western European countries over the past months. Investment pressures have eased considerably in Sweden and Switzerland, complaints about lagging investments are common in Germany and Italy, and a number of large-scale reconstruction and re-equipment programs, particularly in the field of transportation (shipbuilding in England,

* The author is an economist with the Board of Governors of the Federal Reserve System. The views expressed in this article are not necessarily those of the Board.

railways in France and Italy, and truck production in Western Europe in general), are nearing completion.

In many countries the public authorities have elaborated investment plans which so far they have had the greatest difficulty in financing without inflation and which, therefore, might be expected to prevent any tendency toward a depression. It is by no means certain, however, that everything will work out in this way. Many European countries have now made a considerable fiscal effort to create the savings necessary to offset the planned investment. But this investment, to a very large extent, is carried out by the private entrepreneur. At some point, it may simply not be forthcoming in the volume expected and then, provision having been made for it by budget surpluses, selectively restrictive bank credit policies, etc., there would be an ideal setting for a deflation. What needs to be pointed out, therefore, is that the present semi-planned economies of Western Europe have by no means achieved a reliable coordination of savings and investment decisions. Of course, in the past inflation-ridden years, investment projects have repeatedly been subjected to cuts which would presumably be restored as demand recedes. But the feeling of security induced by this consideration may well prove to be illusory, for an entrepreneur who very much wanted to undertake an expansion of his plant a year ago may feel quite differently about such a project when the inflation around him has subsided or turned into deflation.

Even nationalized industries cannot be entirely relied upon to undertake investment programs when a recession has started to set in. In the first place, these industries have already invested at a very high rate during the recent inflationary phase, so that all that might be expected from them is the continuation of the present rate. Moreover, the managers of these industries have been told so insistently over the past years that they should use ordinary business judgment and criteria that, at least during the initial phase of a recession, they may well postpone investments when business in general adopts a wait-and-see attitude.

Another uncertainty affecting business activity in European countries is the level of individual savings. The general inflationary climate and the uncertainty about the prospective level of private savings has led, in a number of countries, to an extremely limited reliance on personal savings as an offset to the planned level of investment. All other forms of savings, such as corporate savings and budget surpluses, seem far superior in that they are more enforceable, *i.e.*, they are less forecasts, which may or may not become true, than targets which can consciously be aimed at by economic policy.

Thus, in France the "inflationary gap" was calculated in 1947-48 on the assumption of zero personal savings.[1] In Great Britain, the 1948 estimate of private savings was 220 million pound but this consists, to the extent of 214 million, of direct taxes on capital.[2] In countries like Norway and the Netherlands the national accounts were actually drawn up on the assumption that there would be a certain amount of net dissaving by private individuals.

It goes without saying that a zero or negative level of personal savings is an anomaly caused by exceptional backlog demands or by inflation. When the backlog demands are filled, when the inflation is stopped and excess liquid holdings have been reduced, a sudden reappearance of private savings on a substantial scale is possible: it is quite likely to take the official planners by surprise.

What policy will or should European countries follow when they are faced, despite planning for full employment, by a recession resulting from over estimates of private investment and underestimates of private savings? As long as inflationary tendencies prevail, the task of the authorities is clear enough, though by no means easy to carry out. The weapons to be used are the familiar ones of restrictive fiscal and monetary policy, supplemented if necessary or advisable, by the use of negative or veto controls over private investment.

Novel problems arise, on the other hand, when individuals are suddenly found to save again, and when private investment ceases pushing incessantly against the limits which have been assigned to it in the total investment program, but starts to fall short of these limits. For a number of reasons it appears unlikely that foreign countries in general, and those of Western Europe in particular, will be able or ready immediately to counteract such developments. In the first place, a mere reversal of the policies followed during the inflationary phase such as, for example, the lifting of credit and investment controls, may be ineffective in reviving demand. Secondly, in countries where inflations have been protracted and violent, the authorities may prefer to err on the side of disinflation, at least for a while. This may be sound policy also because such inflations presumably have given rise to considerable misdirection of resources which ought to be corrected. Finally, and most important, the trend toward recession brings almost automatically a certain improvement in the foreign exchange position of the countries concerned and their authorities will, therefore, hesitate to take "compensatory" measures which are likely to re-create the same degree of

[1] Commissariat General du Plan de Modernisation et d'Equipment, *Perspectives des Ressources et des Besoins de l'Economie Française* (Paris 1947), p. 73.

[2] *The Economist*, April 9, 1949, p. 669.

dollar shortage as existed prior to the onset of the adjustment process. Clearly, the loosening up of the labor market and of resources in general ought to be taken advantage of in order to carry out a reorientation toward export industries (or toward activities providing domestic substitutes for imports).

Economic policy, therefore, will not be concerned solely with the restoration of a sufficient aggregate of effective demand. Balance of payments preoccupations will probably rule out indiscriminate "reflation" with its reliance on the automatic working of the multiplier, and will rather point to the necessity of specific direction of the re-expansion process. But the official investment planning seems to be efficient mainly in expanding the so-called basic sectors of the economy (energy, transportation, iron and steel). With the exception of some large-scale industries, such as petroleum refining and shipbuilding, the official planners do not seem to have been very successful in planning directly for the expansion of exports, not to speak of their direction. This may be a field where exchange rate adjustments, which would render exporting attractive to business, could play a useful rôle not only in immediately producing greater balance of payments equilibrium, but also in generating and guiding a new investment wave.

The present uncertainties about the future course of business activity in European countries make it necessary to re-examine Economic Cooperation Administration policy concerning the so-called counterpart funds which derive essentially from the sale of ECA-financed commodities within the countries receiving aid. Hitherto the United States power over the use of these funds was used primarily to fight inflation, either directly by withholding them from current spending, or by making release dependent on effective anti-inflationary action. With deflationary tendencies outweighing inflationary pressures a reversal would consist in stopping debt retirement programs which are followed in a number of countries and in supplementing releases by additional expansionary action by the foreign governments. But in view of the undesirability of a policy of indiscriminate reflation, such a simple about-face would in general not be adequate; it will be necessary for the ECA to make sure that spending of counterpart funds does not promote short-run recovery from recession at the expense of impeding longer-run recovery from the dollar shortage.

II. *International Repercussions of a Recession*

In examining the implications of a recession for international balance of payments equilibrium, we shall assume at first that a downturn occurs only in the United States while other countries continue to enjoy a high level of economic activity.

Effects of a Recession in the United States Only

This is almost a classical case by this time, for most discussions about appropriate postwar international economic policy have taken this situation as their starting point. It generally was assumed that a fall in U. S. demand would produce balance of payments difficulties abroad, and an international equivalent to the theory of internal compensatory fiscal and monetary policies was elaborated by such writers as Nurkse and Triffin. In such a situation, it was propounded, it would be wrong for the affected countries to "play the rules of the gold standard game" and to contract money and income. On the contrary, international currency reserves ought to be freely spent and the contractive domestic effect of the outflow properly counteracted so as to avoid spreading the deflation and intensifying it in the United States. This analysis is based on two assumptions: First, that there is an approximate balance in international economic relations before the start of the recession; second, that the countries whose balances of payments deteriorate as a result of the recession have reasonably ample foreign exchange resources—either as central bank reserves or as readily available drawings on the International Monetary Fund. We shall now explore the implications of the fact that neither of these assumptions is valid under present conditions.

A depression in a leading trading country is practically certain to create balance of payments problems for its trading partners only if its balance of payments is in approximate equilibrium at the time a recession sets in; but if that country already maintains a considerable export surplus before the onset of the recession, the same proposition does not necessarily hold. The reason for this is quite elementary. A recession starting in the United States will lower the volume and prices of American imports, but it will also decrease the price of American exports. In a situation where this country maintains a huge export surplus the latter factor could easily outweigh the former, *i.e.*, the dollar savings accruing to a foreign country from the fall in import prices could well exceed the loss sustained by the shrinkage of its exports.

This reasoning ought to apply with particular force to the countries participating in the European Recovery Program since in 1948 they still exported to the United States only about one-fourth of their purchases in this country. The 1947 Survey of the Economic Commission for Europe had shown how close to one-half of the increase in Europe's balance of payments deficit from 1937 to 1947 was due to the increases in world prices, quite apart from any deterioration in the terms of trade.[3] A recession with its decline in dollar prices could corre-

[3] Economic Commission for Europe, *A Survey of the Economic Situation and Prospects of Europe* (Washington, 1948), p. 60.

spondingly improve Europe's international position even though the volume of its exports to the dollar area were to be somewhat reduced.[4]

If the above consideration is valid, a recession in the United States could cease to be an unmitigated evil for foreign, and in particular for European, economies. Nevertheless, much relief cannot be expected in this fashion if only because rather narrow limits are set through legislation to a fall in American export prices in the area where it would do Europe most good, that is in agriculture.

Furthermore, a fall in the world price level would profit Europe only if three conditions are fulfilled: (1) the fall in the volume of European exports must not be such as to wipe out the dollar savings obtained through the fall in import prices; (2) the volume of Europe's imports must be held in check in the face of the decline of their prices; and (3) the amount of financial aid must not diminish concurrently with import prices.

It is easy to see that these conditions are only partially met.

In the first place, the United States income elasticity of demand for European exports is likely to be high since Europe exports to the United States a large proportion of luxury and semi-luxury articles.[5]

With regard to the volume of imports, European economies may be relied upon not to expand their imports merely in reaction to price declines. But a tendency toward an increase in the volume of European imports from the United States could nevertheless be expected to assert itself once the domestic sellers' market in the United States had changed into a buyers' market. For this development would permit foreign countries to obtain items previously reserved for domestic consumers and would speed up delivery schedules of American manufacturers for foreign orders of machinery and equipment.

[4] The present paper was written in April 1949, before the outbreak of the new British dollar crisis. This crisis may be held to contradict the view that a mild U. S. recession would not necessarily be unfavorable for the balance of payments position of a country receiving large amounts of American aid. It is highly misleading, however, to explain the loss in British reserves primarily by a decline in U. S. purchases, in other words by the recession in the United States. The main causes of the deterioration in Great Britain's external position during the second quarter of 1949 were rather various capital transactions and increased imports by the United Kingdom and other sterling area countries. The dollar losses incurred by the decline in U. S. purchases of sterling area goods would have been largely compensated by the savings effected through the decline in prices of U. S. exports to the sterling area provided the volume of these exports had remained constant. Moreover, in 1948, the sterling area covered two-thirds of its imports from the United States by its exports, and this relatively high percentage places it outside the class of countries (such as France, Italy, Germany) to which our argument applies with particular force.

[5] See Randall Hinshaw, "Prosperity, Depression and the British External Problem" in *Foreign Economic Policy for the United States*, Seymour E. Harris, ed., (Cambridge, Mass., 1948), p. 84, for data on the high income elasticity of demand for British products in the United States.

The third condition for a price fall to result in balance of payments relief for deficit countries is a *ceteris paribus* with respect to U. S. aid. The continued existence of sizeable foreign aid programs during the current readjustment is a substantial safeguard against an international spread and deepening of a recession just as the abrupt end of private U. S. lending at the onset of the Great Depression had then an important intensifying effect. Nevertheless, there are certain limitations to the extent to which foreign aid outlays may be relied on as a stabilizing factor. In the first place, the emphasis on the real or commodity aspect of our aid tends to provoke curtailments of the dollar amount of aid made available when prices fall. Beyond this technical consideration, it is already apparent that a recession in the United States may bring about a decreased willingness to maintain our foreign aid programs although at least a slowing down of the scheduled progressive reduction in these programs may be called for from the point of view of business cycle policy.[6]

All in all, it appears therefore more than doubtful that the European countries will obtain much relief from a recession in the United States. All that may be affirmed is that the countries receiving large-scale U. S. aid are likely to fare better in a recession than those countries that obtain their dollars primarily by selling goods and services to the United States. The latter countries will feel the full impact of the fall in American demand, and they are quite unlikely, under present circumstances, to apply the policy of freely spending their dollar reserves. Over the past years, all countries have become conscious of the dollar problem and of the desirability to husband their scant remaining dollar resources. A country that sees its dollar deficit increase because of reduced American purchases would immediately retaliate against American exports.

It would seem, therefore, that, in the event of a recession, we would have a special responsibility with respect to those countries that so far have received their dollars primarily through trade channels rather than in the form of U. S. aid. Moreover, it may be in our own interest to see to it that immediate curtailment of their imports from the United

[6] If it is assumed, of course, that the federal budget ought to be in balance under all circumstances, then it is possible to argue, as has been done during recent Congressional debates, that our foreign aid programs are not inflationary—the contention of 1947-1948—but deflationary since they make necessary a greater tax burden than would be required otherwise. This argument would be particularly strong if it is found that the recipient countries do not actually spend all of the aid received, but accumulate an important fraction of it in the form of additional reserves. To tax the American consumer in order to permit foreign Central Banks to hold idle dollar balances would indeed be purely deflationary action. For this reason, stabilization loans ought to be financed through public debt transactions or through direct banking operations rather than through appropriations.

States in retaliation for decreased exports to the United States is avoided or minimized.

Effect of a Recession in Foreign Countries

It was stated in the preceding section, that under present circumstances a recession arising only in the United States could have less unbalancing effects on foreign economies than was generally believed. This statement would need to be less surrounded by qualifications if it is assumed that simultaneously there is some disinflation in foreign countries.

For the purpose of our analysis it would be tempting to distinguish two components of the dollar shortage: a "monetary" one which would designate the external consequences of the condition of "open" or "repressed" inflation which has characterized European, South American, and other economies since the war; and, secondly, a "structural" component which would express the needs for temporary outside financing required to attain a certain level of productivity while maintaining a socially necessary standard of living. Unfortunately the line of distinction between the two components cannot be drawn with any precision. Inflation often involves a special balance of payments drain caused by capital flight, by wasteful investment, and by failure to export; but it is impossible to tell how big this burden is in relation to the total deficit. Moreover, it is likely that a prolonged inflation cannot be stopped without provoking a downturn and without thereby doing away with part of the "structural" component of the dollar shortage, in addition to the monetary one.

In such a situation the need for aid dollars will probably decrease suddenly and situations may arise in which a foreign country is actually unable to absorb foreign aid in the amounts available.

Conditioned as we already are to a general dollar shortage, such inability to absorb aid almost strikes us as something against nature, but it is of course not any more perverse than the inability of an economy to make reasonably full use of its manpower and machinery. A very striking example of this type of situation has been given by Italy which has accumulated in the form of additional reserves of gold and foreign exchange close to one-half of the aid received in 1948-49. This has been done indirectly, of course (*i.e.,* by not using the dollar proceeds of its exports), since ERP dollars are necessarily tied to commodity imports, even though not to imports from the United States. The accumulation of reserves has been largely the result of the stabilization of the Italian internal situation combined with the adoption of a more realistic exchange rate than prevailed elsewhere in Europe.

Similar instances of inability to absorb aid and of accumulation of

foreign exchange reserves have been encountered in other countries where symptoms of a recession have appeared, such as Germany and Belgium. These examples serve to show that our view of a gradual and regular tapering off of the need for aid may be based on the unrealistic assumption of a world where planning is perfect and business cycles are non-existent. After the immediate reconstruction period when war damage is largely repaired, when pipelines are refilled, when some of the most important deferred demands in both consumption and investment are satisfied, and when the monetary overhang has been worked off in one way or another, many foreign economies are likely to pass through a period of adjustment during which their needs for foreign aid may be smaller than in a subsequent period when a new cycle of investment is undertaken. But the very fact that we have not made any provision for cyclical changes in determining the need for aid may help in the overcoming of foreign recessions. For the accumulation of dollars on the part of a foreign country experiencing a recession and the realization that it may well face a cut in aid if the accumulation continues may yet cause it to throw caution overboard and to undertake vigorous anti-deflationary action.

Thus it becomes possible to distinguish three postwar stages in the interaction between internal and external disequilibrium. It cannot be denied that to a certain extent during the immediate postwar period an inflation carried with it a dollar premium.[7] In a second period, as the volume of our aid shrank, anti-inflationary policies gained in attractiveness since they permitted foreign countries to absorb the decrease in our aid with a minimum of internal stresses. In a third period, the competition for the dollars made available by us may yet become a powerful factor in avoiding any prolonged recession of foreign economies. This would be a new and possibly quite valuable mechanism: so far, every country that in a depression made faster progress than the rest toward recovery was penalized by experiencing a strain in its balance of payments and a loss in reserves. Now, with the resulting deficit being made good by dollars contributed by the United States out of a limited amount of aid, the penalization would be changed into reward.

[7] It is not implied that foreign countries have willfully engineered inflation in order to become "eligible" for U. S. aid. An inflation is far too much fraught with social and political dangers for it to be provoked lightly by any government. In so far as inflations have resulted from positive action, rather than from omissions, on the part of national governments, they have been due to overambitious investment and development programs, rather than from any conscious attempt to capture a larger share of U. S. aid than would have been obtained otherwise.

THE THEORY OF PRICE OF STORAGE

By HOLBROOK WORKING*

The theory here considered is an attempt to solve a problem presented by conflict of accepted theory with observed price behavior. It seems to have important implications regarding consequences of futures trading, and to throw some light on the general subject of effects of economic expectations. The problem arises out of evidence on *inter-temporal price relations,* and we must first take time to get a clear view of the essential facts which must be comprised in a theoretical formulation.

I. *The Problem*

Inter-temporal price relations are here defined as relations *at a given time* between prices applicable to different times. For examples, one may take the relation at a given time between a spot price and a forward price for the same commodity; or one may take the relation between two forward prices, such as the relation between prices of the December and the May wheat futures, or the May and the September futures, at a given time.

We exclude from "inter-temporal price relations" the relation between price today and price at some previous date, or the relation between prices at two previous dates. Such relations are not relations between simultaneously quoted prices applicable to different times; they express price *changes* which occur through time, and may best be characterized simply as price changes. They are brought into relation only by the artifice of a statistical table or chart.

It has been customary to regard an inter-temporal price relation as commonly a relation between two substantially independent prices. For example, if the price of September wheat is quoted in April at 15 cents per bushel below the simultaneous quotation for the May future, the customary explanation has been that the relatively low price of the September future reflects expectation of a large wheat harvest, which will depress the price of wheat by September, but which (so the explanation runs) cannot affect the price of wheat in May.

Now empirical investigation has shown this explanation to be wholly

* The author is economist and professor of prices and statistics at the Food Research Institute, Stanford University.

mistaken. In the first place, the amount by which the price of the September future is discounted relative to the May future *does not* depend on the expected size of the crop to be harvested between May and September. In the second place, it is *not* true that expectations regarding the coming crop can have no effect on the price of the May future; on the contrary, expectations regarding the harvest which will occur after May affect the price of the May future in approximately the *same* degree as they affect the price of the September future. Sometimes, indeed, changes in expectations regarding the coming crop seem to affect the price of the May future *more*, in cents per bushel, than they do the price of the September future. There seems to be some tendency for the relation between the two futures to remain constant in *percentage* terms, if nothing happens except a change in expected size of the new crop. Suppose, for example, that in early April the price of September wheat is $1.50 per bushel, and the price of May wheat is 10 percent higher, at $1.65. Now suppose that serious crop damage is thought to be detected during April and the price of September wheat rises to $1.80; the price of May wheat may very well rise to about $1.98, maintaining the former percentage relation to the price for September delivery, but actually rising 33 cents, under the influence of supposed crop damage, where the rise in price of the September future was only 30 cents.

The foregoing statement of fact is based on empirical studies which have attacked the question from other angles besides the one suggested above.[1] The results from all lines of investigation concur in indicating that prices quoted at one time, in a futures market, for two different dates of delivery, stand in a relation which in general *does not* reflect expectations regarding events that may occur between the two delivery dates. This conclusion holds whether the dates lie in separate "crop years," as in the example considered above, or in the same crop year.

What, then, *are* the influences which determine inter-temporal price relations? In the example considered above, a true explanation would be that the price of May wheat (in April, let us say) is above the

[1] See the following publications, issued under *Wheat Studies of the Food Research Institute*: "The Post-Harvest Depression of Wheat Prices," November 1929, VI (1); "Price Relations between July and September Wheat Futures at Chicago since 1885," March 1933, IX (6); "Price Relations between May and New-Crop Wheat Futures at Chicago since 1885," X (5); "Price Relations of Liverpool Wheat Futures with Special Reference to the December-March Spread," XVII (3). All are by the present author, the last in collaboration with Sidney Hoos. Some theoretical implications of the findings other than those considered here are examined, and more detailed citation of evidence is given, in "Theory of the Inverse Carrying Charge in Futures Markets," *Jour. Farm Econ.*, Vol. XXX, No. 1 (Feb., 1948), pp. 1-28, and "Professor Vaile and the Theory of Inverse Carrying Charges," *Jour. Farm Econ.*, Vol. XXXI, No. 1 (Feb., 1949), pp. 168-72, also by the present author.

price of wheat for September delivery because the *last* crop was small (perhaps the carryover from still earlier crops was small also, contributing to the effect). So far as supplies are concerned, it is only supplies *already in existence* which have any significant bearing on a current inter-temporal price relation of this sort.[2]

This statement of fact poses the theoretical problem to which we now turn. How shall we account for the observation that it is existing supply rather than expected change in the supply which is involved in determining inter-temporal price relations? The answer is easy for one set of circumstances, which we may consider first.

II. *Clear Aspects of the Theory*

The theory of inter-temporal price relations is simple and has long been fairly well understood so far as concerns the condition of large supplies, involving stocks which must be carried from one date to another in such volume that direct economic reward must be offered for the service of stock-carrying. In those circumstances, relations between prices for delivery at the two different dates are commonly regarded as depending on the "cost" of carrying the stocks. This is a condition which has often existed for wheat in the United States as regards the relation between prices for December and for May delivery. It is commonly said, with approximate accuracy, that in the presence of abundant supplies the price for May delivery tends to be the price for December delivery plus the cost of storing wheat from December to May. At various times in the past supplies have been so large that even the relation between the price for May delivery near the end of one crop-year, and the price for delivery in the subsequent September following a new harvest, seemed clearly determined by the cost of storing wheat over the interval.

This theory of inter-temporal price relations under the condition of abundant or super-abundant supplies has the defects common to all cost theories of return for an economic service. If the return for a service is determined freely and competitively, it will vary according to demand and supply conditions. Such is the case with returns for storage of wheat. If stocks to be stored are exceptionally large, the return for carrying wheat may exceed the "cost" of storage, as conventionally calculated. If stocks are quite moderate, competition among firms with storage facilities tends to result in the storage being provided for a rather small return per bushel.

[2] In some special cases this statement is subject to minor qualification, but the cases are such as have not been found in the United States wheat market. The basic theory of inter-temporal price relations must be founded on conditions such as are described in the text and then elaborated, if necessary, to cover conditions of more complex character.

This amendment of the theory first described above leads to explaining inter-temporal price relations under the pertinent conditions as determined by a competitive "necessary return for storage." We may now say that the price of wheat for May delivery exceeds the price for December delivery by the amount of the ***necessary return for storage*** from December to May. Given a futures market, active informed competition occurs in determination of the necessary return, because any elevator operator who hedges the stocks he carries knows within rather narrow limits what return he will receive for the storage service rendered.

Near the end of November, for example, the hedger may make a choice whether to sell wheat which he has in store or to carry it until May. For purposes of the reasoning, it makes little difference whether the wheat at the time of decision is hedged in the December or in the May future; if the hedge is in the December future, decision to hold beyond December will require transfer of the hedge to the May future, at a cost, at most, of only 0.3 cent per bushel, and at a cost of only 0.15 cent per bushel if the hedger holds membership in the exchange, as large hedgers do for the sake of such savings. Suppose the hedge already in the May future. In making his decision, the hedger assumes as a first approximation that at the end of April the price of the wheat he owns will stand in the same position relative to the price of the May future as it holds at the end of November relative to the December future. If events should conform to that assumption, his return for storage would be exactly the amount by which the price of the May future exceeded the price of the December at the time the decision was made. If he thinks that the price of the wheat he owns will either appreciate or depreciate relative to the price of the specific quality of wheat represented by the futures contract, any such expected change must be applied as an adjustment to the known price difference between the two futures in order to arrive at his expected return for storage. Yet even in cases where there is opportunity for substantial change in relation between the price of the wheat owned and the price of "contract wheat"—opportunity which may exist either because of a large difference in quality or because of a large difference in location—it is common to make no adjustment for this possibility because the most reasonable assumption at the time is that no change in relation will occur. In any case, the known relation between prices of the two futures gives the hedger a basis for anticipating his return for storage which is far superior to any estimate which could be made in the absence of a good hedge in a futures market or of an outright forward sale of the actual wheat.

Thus existence of a futures market, coupled with the practice of

hedging, gives potential holders of wheat a precise or at least a good approximate index of the return to be expected from storing wheat. This is an important fact which has been too much neglected in discussion of the economics of futures trading. It is through supplying a direct measure of the return to be expected from storage, and a means, through hedging, of *assuring* receipt of that return, or of approximately that return, that a futures market makes its most direct and powerful contribution to the economical distribution of supplies of a commodity over time.

A known return for storage is, in essentials, a price of storage. The fact that the price of storage is not quoted directly, but must be derived by taking the difference between quoted prices of wheat for two different dates of delivery is immaterial for the economic reasoning. The price difference, at least when it is positive, is in all essential respects itself a price of storage, determined in a free market through the competition of those who seek to supply storage service. The general form of the storage supply curve is known from statistical studies and may be represented as in Figure 1.

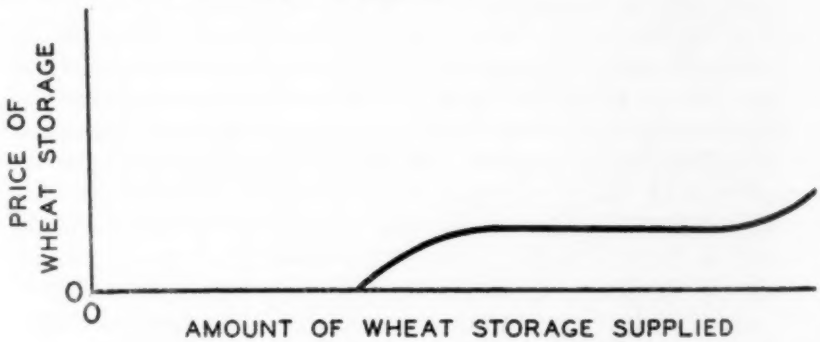

FIGURE 1. STORAGE SUPPLY CURVE

Because Figure 1 is a generalized representation, scale values are not shown except at the origins, which are taken as zero for both price and amount of storage. The price scale depends, among other things, on the length of time-interval involved; for example, the price figures will be larger for storage from September to May than for storage from December to May. The quantity scale depends, for one thing, on the time of year, for reasons that are somewhat complicated, but relate partly to opportunities to use the storage facilities for storing other grains. This observation suggests that the position and form of the curve itself may change somewhat from year to year with variation in those alternatives. The scale depends also on the measure used

for amount of storage; the indices of amounts which are available for statistical analysis are not quite the measures which would be chosen for theoretical discussion.

III. *The Theoretical Problem*

The foregoing theoretical treatment does not meet the problem posed at the outset because this theory considers only the case in which the price for later delivery is *above* the price for earlier delivery, affording a positive return for storage, or price of storage, whereas the problem tends to emerge clearly only when the price for deferred delivery is *below* the "nearer" price.

One approach to treatment of the latter class of circumstances is afforded by extending the theory to admit consideration of negative prices of storage. We may then draw the supply curve for storage as in Figure 2, which differs from Figure 1 only in that the curve of the

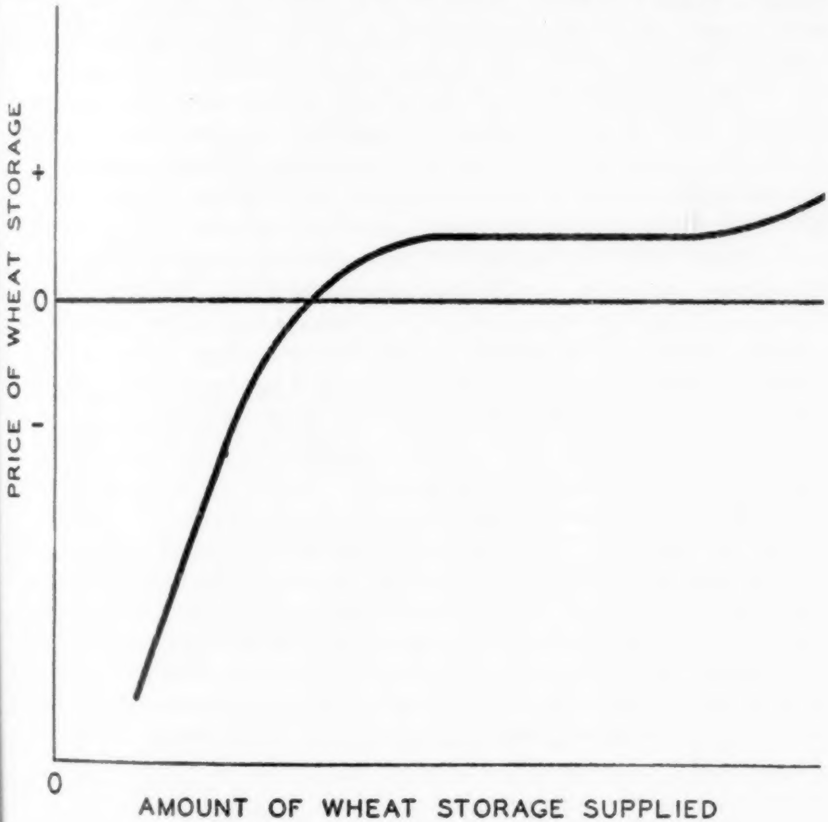

FIGURE 2. COMPLETE STORAGE SUPPLY CURVE

earlier diagram is extended downward and to the left, into an area of negative prices.

This diagram also is founded on statistical observation. When the difference between prices for near and for later delivery, which we have seen may profitably be regarded as a price of storage if it is positive, takes negative values, wheat is nevertheless stored in substantial quantities over the time-interval considered. The amount which is stored, however, tends to be less when the "price of storage" is negative and large, than when it is negative and small. There is strong evidence that the continuity of the curve is uninterrupted where it crosses the zero line.

Let us now consider a question which might have been raised with regard to Figure 1. Both Figure 1 and Figure 2 show, as is demonstrably the case, that a large amount of storage is supplied even when the price of storage is exactly zero. One condition which makes that possible is the fact that storage of grain is an enterprise in which most of the costs are fixed costs, from a short-run standpoint. Another important condition is that for most of the potential suppliers of storage, the costs are joint; the owners of large storage facilities are mostly engaged either in merchandising or in processing, and maintain storage facilities largely as a necessary adjunct to their merchandising or processing business. And not only are the facilities an adjunct; the exercise of the storing function itself is a necessary adjunct to the merchandising or processing business. Consequently, the direct costs of storing over some specified period as well as the indirect costs may be charged against the associated business which remains profitable, and so also may what appear as direct losses on the storage operation itself. For any such potential supplier of storage, stocks of a commodity below some fairly well recognized level carry what Kaldor has aptly called a *convenience yield*.[3] This convenience yield may offset what appears as a fairly large loss from exercise of the storage function itself.

Thus we have an explanation not only of why large quantities of wheat are stored in the absence of any direct return for storage, but also of why wheat is stored when the figure which we have chosen to call "price of storage" is negative. There remains, however, the question whether it is good theory to treat these negative values as negative prices. Should we, rather, say that the difference between prices of a commodity for two different dates of delivery may be considered a price of storage only when the indicated price is positive, and that some other theoretical treatment of the relation should be provided to cover the

[3] Nicholas Kaldor, "Speculation and Economic Stability," *Rev. Econ. Stud.* (1939-40), Vol. VII, p. 6.

area of negative values? Other possible treatments come to mind, but none which seems to me to have merits which warrant advancing it as preferable to recognition of the existence of negative prices of storage.

IV. *Supplementary Considerations*

If we leave open the question which has just been raised, there may be occasion to reconsider how well, in fact, the price-of-storage theory serves in the area of positive "prices of storage." Two limitations of the theory may be noted: (1) much storage is supplied by people who do not hedge and who decide to store, or not to store, without regard to what we have called the price of storage; and (2) much storage by those who do hedge earns a return which is not exactly equal to the market price of storage. Neither of these limitations has any importance from the standpoint of principle, however; each has its counterpart in familiar price theory. If people store without regard to the current market price of storage, so do people produce vegetables without regard to the current market price of vegetables. And if some people store because they expect to receive a higher return than the quoted market price of storage, so also do people produce goods in expectation of a higher return, owing to quality or to place of sale, than the price recorded in available quotations.

A particular merit of the price-of-storage theory is that it exposes clearly the fact that in the presence of hedging much storage does occur in response to a recorded, and competitively determined, assurance of return specifically for the storage itself. This creates a situation very different from that where storage is undertaken simply in the hope of price appreciation. As has been remarked, this establishment and recording of an exactly or approximately known return for storage is a principal means by which futures markets facilitate the economical distribution of supplies through time.

This merit of the price-of-storage theory is one which argues for extending the theory to cover negative prices. The negative prices occur when supplies are relatively scarce. They then impose pressure on hedging merchandisers and processors to avoid holding unnecessarily large quantities out of consumption in the form of stocks which they can do without.[4] Thus a negative price of storage makes available for consumption in a year of shortage, supplies which would otherwise remain tied up in "convenience stocks." In the case of wheat in the United States, the quantity which may be drawn out of pure con-

[4] A correspondent whose remarks have been much appreciated has advanced the objection that recognition of a negative price of storage implies that people are paid for ***not storing***. To my mind, it implies that people are paid ***in reverse*** (that is, have to pay) for such storing as they choose to do.

venience stocks and made available for current consumption by a negative price of storage is of the order of 75 million bushels.

The main reason, of course, for adopting the cost-of-storage theory, or some alternative which provides *direct* explanation of inter-temporal price relations, is that some such explanation is necessary to account for observed price behavior. Only some direct explanation of the price relation in terms of an existing condition can account for the fact that expectations regarding future events, which are directly pertinent to a distant forward price, have approximately the same effect on spot and near forward prices as on a distant forward price.

COMMUNICATIONS

Federal Expenditure and Revenue Policy for Economic Stability

Editor's note—The following statement, together with a second statement *Fiscal Policy in the Near Future,* was transmitted to the Joint Committee on the Economic Report September 23, 1949. See: *Federal Expenditure and Revenue Policies,* Hearings before the Joint Committee on the Economic Report, September 23, 1949, 81st Cong., 1st sess., U. S. Government Printing Office, Washington, D.C. The reports were also printed in *Monetary, Credit, and Fiscal Policies,* a Joint Committee print of statements from various sources and in the *Congressional Record,* September 26, 1949, pp. A-6137-9. The statement is of such general interest to economists that it was thought desirable to reprint it in the *Review.*

The statement was drafted at a conference called by the National Planning Association at Princeton, N.J., September 16-18, 1949, at the request of the Subcommittee on Monetary, Credit and Fiscal Policies of the Joint Committee. It was adopted unanimously by those attending. The signers were: Howard R. Bowen, Howard S. Ellis, J. Kenneth Galbraith, James K. Hall, Albert G. Hart, Clarence Heer, E. A. Kincaid, Simeon E. Leland, Paul Samuelson, Lawrence H. Seltzer, Sumner H. Slichter, Arthur Smithies, Tipton R. Snavely, H. Christian Sonne, Jacob Viner, and Donald H. Wallace.

Introduction

Although our economic system accords a dominant rôle to private enterprise, government expenditures and receipts have now reached a scale that make them crucially important factors in our national welfare. In 1949, with a gross national production of 250 billion dollars, the federal government is spending more than 40 billions, while federal, state, and local governments together are spending around 60 billions.

Government programs of this size make it more than ever desirable that every dollar of government expenditures be used as efficiently as possible. We are not rich enough to afford waste of resources by government any more than by anyone else.

It is equally important that the expenditure and revenue programs of government, in their formulation and execution, be consistent with the progress and stability of the private economy. The fiscal policy of the government must make useful positive contributions to the maintenance of high levels of employment and income—the goals declared in the Employment Act of 1946 to be a national objective.

Government affects business through both sides of its budget. Payments to government employees, bond holders, veterans, the aged, and the needy all constitute income that can be used to buy consumption goods from business; government procurement affords a direct market for business. On the other side of the budget, taxes capture funds that consumers might have spent or that business firms might have invested in improved facilities. Taken by themselves, tax collections tend to shrink the market of private business, contract employment, and lower prices; just as, taken by themselves, government ex-

penditures tend to expand the market for business, increase employment, or raise prices.

It is not only the size of revenue and expenditure that counts; their composition must also be considered in any appraisal of the effects of government policy. The economic effects of a billion dollars collected in the form of income taxes will be different from those of a billion dollars collected in excise taxes. Spending to build roads may stimulate private investment in automobiles, trucks, and garages; there are other forms of expenditure that may have adverse effects on private investment. Rationally or irrationally, government spending and taxing may greatly affect the climate within which families and businesses make their decisions.

The Principle of an Annually Balanced Budget

The traditional goal of fiscal policy was to secure a balanced budget in every single year. But that objective has now proved impracticable and, besides, has serious disadvantages in principle. There is not even a clear or unique concept of "budget" to which the requirement of balance could be applied. For instance, in *the regular budget,* bookkeeping transfers to the social security trust account are classified as expenditures. As a result of this, that budget may show a deficit at a time when *the cash budget* shows an excess of receipts over outgo. But even the cash budget may not be adequate to portray the effects of fiscal policy; taxes may have their impact when tax liabilities are incurred rather than when payment is made; purchases may have their impact when contracts are entered into rather than when disbursements are made. However, where a single budget concept is used in economic analysis bearing on stabilization policy we prefer the cash budget to any available alternative.

Compared to the full span of the business cycle, a year is a short period of time. To insist upon a balance in every single year is certainly undesirable and to attain it is probably impossible. To attempt to raise tax rates every time there is a decrease in national income will only result in discouraging private consumption and investment at a time when these are most in need of expansion; on the other hand, to try to eliminate a tax surplus by cutting tax rates or expanding government activities would serve to increase inflationary pressures at a time when they are already acute.

If the budget were balanced in good years as well as bad, there would have to be either big fluctuations in expenditure programs or severe and perverse changes in tax rates. To vary expenditures in this manner would disrupt the essential services provided by government. Applied to military expenditures, it would mean a large defense program in boom years and a small defense program in depression years. This is both ineffective and wasteful. Government would be increasing its employment of resources when they were scarce and cutting down on their use when they were abundant. This, of course, would aggravate the fluctuations in private business.

The Problem of Controlling Government Expenditures

Annual budget balancing is, thus, both difficult in practice and unsound in principle. But one great merit it does have: it provides a yardstick by which

legislators and the people can scrutinize each activity of government, testing it both for efficiency of operation and for its worthwhileness in terms of cost. Every government program undertaken has to be paid for in a clear and unequivocal sense. The Legislature and the Executive are required to justify additional taxes equal to the cost of any new program. This is a principle every citizen can understand. If dropping the principle of annual budget-balancing were to mean dropping all restraints to unwise and inefficient expenditure, grave damage would be done to our economic and political system.

Were expenditures divorced entirely from the need for taxation, political opposition to extension of the government's expenditure programs would largely disappear. The scale on which the public sector absorbs resources would grow beyond what was really desired by the people as a whole; sooner or later the country would find itself in a state of chronic inflation. Such inflation is a sign of weak government and comes from eagerness to spend without a willingness to tax. Accordingly other general principles, other habits of thought and of action must be set forward to insure the standards of judgment and the self-discipline of government's activities and to do better what the principle of annual budget policy attempted—though imperfectly—to accomplish.

Experience shows that business activity has its ups and downs. There is thus a strong case for counter-cyclical fiscal action—surpluses in good times and deficits in bad. If we do not adopt such a policy deliberately we are likely to be forced into an imperfect version of it through the pressure of events. One of the major questions for the future is how such a policy can be administered with the restraint and efficiency that is supposed to be achieved through the balanced budget rule. If a flexible policy is to win acceptance, it must not be used as an excuse to introduce expenditure or tax programs that cannot be justified on their merits. Boondoggling should have no place in a rational fiscal program.

We doubt whether it would be possible, or even desirable, to rely exclusively on fiscal action to offset fluctuations in private business. That course could easily involve changes of impractical magnitudes in taxes and expenditures; it would mean placing excessive reliance on one measure for achieving economic stability and growth; it would involve problems in forecasting beyond the reach of present knowledge and techniques.

We can, however, reasonably expect that the budget be formulated in the light of economic judgment available that takes full account of the actual course of events and should contribute to economic stability rather than aggravate instability. In view of uncertainties, part of the planning process should be preparation for quick adaptation of fiscal operation to changing circumstances. Certain automatic devices for bringing remedial forces quickly into play are in a stage where they deserve consideration.

Guides to Fiscal Policy in Normal Times

When the economy is prosperous and stable and there is no clear-cut reason to expect a change in any particular direction, the objective of policy should be to adapt the budget to changes in the government's requirements but to leave its economic impact on total employment and purchasing power un-

changed. This could be approximately achieved if newly planned increases or decreases in expenditures were to be matched with corresponding changes in planned tax receipts. The net expansionary or contractionary effect of the budget would then remain roughly the same. Thus, in conditions of continued prosperity, a modified version of the balanced budget rule could be used as a guide: taxes should grow or shrink corresponding to desired changes in expenditures. Thus proposed increases in expenditures would be exposed to the traditional test of whether they are worth their cost in terms of taxes.

However, if recent events and the outlook for the near future pointed, on balance, toward unemployment and deflation in the private sector of the economy, then budgetary changes should be made in the direction of producing a moderately expansionary effect. New government expenditure programs should still be considered on their merits, but the additional taxation that in prosperous times would accompany them should now be deferred. Taxes that are deferred in these circumstances should be put into effect as soon as that can be done without impeding recovery. There should be no delay in making the tax reductions warranted by any reductions in government expenditures; and if expenditure requirements are expected to decline in the future, anticipatory tax reductions could be enacted.

On the other hand, if the weight of the evidence appeared to be on the inflationary side, the opposite policy should be followed. The rule that increased expenditures should be accompanied by increased tax yields should be rigidly followed. Tax reductions that would normally be in order should be deferred; and tax increases should anticipate expected increases in expenditures.

Guiding Principles in Time of Acute Recession or Boom

Where there is a definite expectation, justified by events, of serious recession or inflation, more strenuous fiscal measures would be called for, and the policies described above should be supplemented by emergency fiscal action.

In the event of severe recession, it is not only politically necessary, but economically desirable to provide additional employment projects that can be started and ended quickly. Temporary tax relief should be given in order to stimulate private spending and employment. Other incentives for private investment, such as guarantees, should be considered. There can be no social or economic justification for allowing mass unemployment to persist for extended periods at a time when there is abundant need for roads, schools, hospitals, and other useful objects of public expenditures. However, we recognize that there are difficult questions of extent and timing connected with any such program. An over-ambitious government program may impede the course of recovery in the private sectors of the economy by dislocating resources and delaying needed price adjustments. On the other hand, a program that was over-cautious could needlessly fail to advance recovery by not stimulating the demand for the products of private industry. Much skill and judgment are required to move from depression to stable prosperity. We must not rely on the private economy, unaided by government action, to perform that task. The government must not shirk the responsibility placed on it by the Employment Act, and fiscal policy is one of the most promising instruments it possesses.

On any occasion when serious inflation is in prospect, emergency measures would be needed to curtail expenditures and increase taxation. Wartime and postwar experience provides convincing evidence that the political obstacles to a fiscal policy adequate to combat inflation are so great that there is little practical danger of going too far. The survival of a relatively free and stable price system depends heavily on our willingness to fight inflation by fiscal methods.

A policy that helps to maintain stable prosperity will be no more likely in practice to result in an upward trend in the national debt than one that does not. The course of events may in fact be such that stabilization requires steady reduction in the debt. Budgeting surpluses to fight inflation will provide for the reduction of the public debt in a helpful rather than a painful fashion. Surpluses are not feasible in times of depression. They are desirable where the private economy is strong enough for the government to tax more than it spends without causing unemployment. The private economy is not likely to possess this strength if government policies aggravate rather than offset business fluctuations.

Additional Possibilities for a Flexible Fiscal Policy

While we consider these guides for budget policy essential to a stabilization program, the annual budget cannot, in the nature of things, be based on precise forecasts; nor can it be expected to compensate for sudden and short-run fluctuations in business that occur within the period of its operation. Even though the budget can and should be amended in the light of changing circumstances, the legislative process is necessarily too cumbersome to make delicately timed adjustments in fiscal policy. Therefore, we consider whether further flexibility can be achieved by two devices which may be called *"automatic flexibility"* and *"formula flexibility."*

"Automatic flexibility" means a tax system such that revenue under a given set of tax rates will fall sharply if unemployment develops, and rise sharply in the opposite case of inflation; and expenditure programs under which increased outlays arise from increased unemployment.

"Formula flexibility" means a system under which pre-announced tax cuts and upward revisions of spending programs will come into force if unemployment exceeds a certain figure or production falls below a certain level, and pre-announced changes in the opposite direction if price indexes rise at more than a certain speed.

Automatic Flexibility

Automatic flexibility is exemplified by the unemployment compensation system. If unemployment increases, employers' contributions at once decline, while the unemployed begin almost immediately to draw more in benefits. Thus the government finds itself automatically taking less money out of the public's pockets and putting more in.

There are now many such flexible elements in federal taxes and revenues; and they have greatly increased in importance with the growth of the budget. Besides the unemployment compensation system, there is, for example, substantial automatic flexibility in personal and corporate income taxes.

Automatic flexibility can slow down and perhaps halt a decline of activity or a rise of prices; it can give time for restorative forces to come into play, but it will not, by itself, pull activity back to a full-employment level or restore prices to a pre-inflation level.

We feel strongly that the existing automatic flexibility makes an important contribution to economic stability, which should not be frittered away, as it would be, for instance, by rigid application of the annual-balanced-budget rule. But we do not believe it prudent for policy to regard automatic flexibility as more than a first line of defense; more must be done to cope with serious economic fluctuations.

Formula Flexibility

The enactment by Congress of rules under which tax rates, and perhaps of rules under which expenditure programs, will shift in certain contingencies specified in advance is a possibility that deserves further exploration. For example, the period during which unemployed workers can draw unemployment compensation might be extended according to a flexible schedule based on the volume of unemployment. The withholding rate under the personal income tax for any calendar quarter might rise by a stated amount above a standard rate whenever, say, the index of retail prices has increased by over a certain amount in the preceding six months. The withholding rate might be lowered whenever standard indices of production and employment drop below stated levels or trends.

The question of formula flexibility shades off into the question of granting to the Executive wider discretionary authority than it now possesses to initiate changes in the timing or extent of the fiscal program. This raises difficult issues of political principle and administrative responsibility. We can here do no more than call attention to them.

Conclusion

In this statement, we have confined ourselves to fiscal policy of the federal government. But, while essential, that is only one element in a stabilization policy. The policies of state and local governments can make useful contributions within their more limited spheres. Monetary and credit policies including debt management must play an active role in their own right and must be properly coordinated with fiscal policy. All necessary measures must be taken to preserve and stimulate competition. Supported by such measures, federal fiscal policy offers the best prospect of achieving sustained prosperity within the framework of our existing economic system.

The Havana Charter: Comment

In a recent article in this *Review*,[1] Sir Hubert Henderson advances the most serious objection so far registered against the International Trade Organization Charter. Unlike most critics, he attacks neither its idealism nor its con-

[1] Sir Hubert Henderson, "The Havana Charter," *Am. Econ. Rev.*, Vol. XXXIX, No. 3 (June, 1949), pp. 605-17.

cessions to realism, but holds that its basic principles are fundamentally unsuited to the conditions and problems of the modern world. Because this criticism strikes at the Charter's very roots, and also because it raises issues which are vital to the whole current approach to international cooperation, it merits careful attention.

As Sir Hubert points out, the basic principles of the ITO have never been called in question, at least by its chief sponsors. Certain desirable aims, which the Charter seeks to realise, have been taken for granted. These are: (a) a large and expanding volume of international trade, to permit the fullest possible realisation of the advantages of international specialisation; (b) as a necessary condition thereof, the "utmost practicable scope" for multilateral payments; (c) "commercial policies which satisfy the desire for equity and fair-dealing between nations" (p. 607).

From these aims, it has seemed only a short step to the principles of the Charter as a means to their realisation. The principles of the Charter Sir Hubert summarises as follows: (1) Non-discrimination; (2) Reduction of tariffs on the basis of reciprocal concessions; (3) Outlawry of import restrictions (subject to many reservations); (4) Free convertibility of currencies (relating, strictly speaking, to the Fund rather than to the ITO).

These principles seem to flow logically from the aims almost everyone accepts as desirable. But, Sir Hubert interposes, the list of principles is misleading because it is incomplete—it omits equilibrium in the balance of payments. This is a "requirement of paramount importance," and it cannot be adequately met by the numerous exceptions and escape clauses of the Charter. It is the "central problem of modern international economics," and any plans for international organisation which take it for granted or fail to approach it constructively are doomed to failure.

Turning to the specific principles of the Charter, Sir Hubert has no difficulty in showing that with respect to non-discrimination, the attitude of the United States is inconsistent. We want western Europe to reduce its dependence on us, in part by supplying itself with more from its own resources. But we are unwilling, because of our insistence on the principle of non-discrimination, to sanction preferential treatment unless it goes all the way to a customs union. Discrimination, we hold, should be permitted only for exceptional occasions, when balance of payments difficulties are serious. The normal practice should be non-discrimination.

Sir Hubert contends, however, that the distinction between "exceptional" and "normal" is unreal. "The restoration of basic equilibrium in the international balance of payments is no mere passing problem of the transition from war to peace. It is a long-term, large-scale task" (p. 608). Also, he argues with much force, a customs union for western Europe is impracticable. In the short run, control of the balance of payments is essential to each country to enable it to safeguard its international position. In the longer run, a customs union is probably over-ambitious, and therefore likely to lead to make-believe and frustration.

In its approach to tariffs, Sir Hubert feels, the ITO is passive rather than constructive, since it contributes nothing toward the solution of the para-

mount problem of balance of payments equilibrium. For it requires *reciprocal* concessions, and this means that concessions which increase America's imports must be balanced by concessions which increase America's exports by a similar amount. "This, in turn, comes very near to making it a *sine qua non* of tariff reductions that they should do nothing to solve the dollar problem or to readjust the balance of payments of the world" (p. 612). In the world as it is, the general principle should be that countries should reduce tariffs in proportion to the strength of their balance of payments position.

Sir Hubert takes a dim view of the prospects of resolving international maladjustments through the price mechanism. Reliance upon the forces of the price system are all very well when adjustments are small or marginal, but not when they are large. For the latter, "it is necessary to supplement and sometimes to supersede these forces by more direct measures, consciously directed to the object which has to be attained" (p. 613). He concludes, therefore, that the orthodox solution of large maladjustments by altering exchange rates, and proceeding from this to the reduction of tariffs and the elimination of quantitative restrictions, is misleading. Exchange depreciation is no "sovereign remedy for a balance of payments deficit." Even establishment of the correct exchange rate[2] tends to raise prices, costs, and incomes, and to set in motion a spiral of inflation and devaluation.[3]

A more fundamental consideration than the practical dangers of devaluation, however, lies in the large-scale character of the change which must be undergone by a country in straitened international circumstances. Such a country must readjust the whole structure of its economic life, in particular its habits of consumption and production. To effect a "radical change in the composition of a country's imports" requires resort to direct controls; reliance cannot be placed upon the price-making forces. "Any necessary reduction of imports will be less injurious to its standard of life, if it is *selective*, falling heavily on some items and sparing others, than if it is indiscriminate" (p. 615).

This, considerably truncated, but I hope not seriously distorted, is Sir Hubert's case. His analysis is most ably reasoned and attractively garbed. I am convinced, however, that it is fundamentally wrong, and, in Sir Hubert's own terms, misleading. Successfully to challenge his position in the sense of really joining the issue, he must be met on his own ground. Therefore it must be admitted that the problem of balance of payments equilibrium is of "paramount importance." This is certainly consistent with generally received opinion. It may be taken as an axiom that an expanding volume of international trade cannot be achieved in a world bound by exchange controls, quantitative restrictions, and the resultant bilateral trading arrangements, but that it requires as a necessary condition a fully multilateral system of payments. The latter, however, cannot be restored until the acute balance of payments disequilibrium is solved. It must also be taken for granted that,

[2] Sir Hubert calls it "the right degree of 'under-valuation.'" It would be better to say, "the equilibrium rate."

[3] Sir Hubert admits that devaluation may be essential after internal inflation has caused a currency to become overvalued.

in line with the purposes of the European Recovery Program, western Europe will do its utmost to become self-supporting by 1952. We may reasonably assume, however, that ERP will fail by a substantial margin to eliminate the deficit in Europe's international accounts. On the basis of this area of agreement, let us examine the implications of Sir Hubert's position.

Sir Hubert urges us to choose a particular method of organising the economic relations of nations with a view to solving their urgent balance of payments problem. In essence, his choice reduces to this: to continue, for a long period of time—and hence probably indefinitely—a system in which reliance is placed, not upon adjustments via price changes, but upon conscious regulation of the balance of payments through tariffs and quantitative restrictions.

The alternative choice is the approach adopted by the United Nations and the new international agencies associated with it—the International Monetary Fund, the International Bank, and the proposed International Trade Organization. This is to remove, within a really short period (by 1952-53), existing quantitative restrictions and exchange controls, and to adjust any remaining balance of payments disequilibrium through the establishment of exchange rates appropriate to the new conditions. Thereafter it is proposed to allow international specialisation on the basis of comparative costs to determine the movement of goods and services. As remedies for temporary disequilibria, there will be available the resources of the IMF and the use of exchange controls and quantitative restrictions according to agreed rules. To correct more lasting disequilibria, devaluation may be used if appropriate; if not, a nation's productive structure may be altered through the development of new or the diversion of existing resources. To facilitate such structural change, international financial and technical assistance will be available through the International Bank and President Truman's "Point Four." There are also the exceptions in the ITO Charter which permit the use of tariffs and quotas to foster economic development.

Sir Hubert's choice means the continuance of bilateral trading arrangements and trade controls, and *no* return to a multilateral system of payments. It can mean nothing else. But this is precisely what the experience of the 1930's and of the postwar years teaches us we should avoid. Granted that the balance of payments problem must be solved *before* a multilateral payments system becomes possible, Sir Hubert's method would solve it in a fashion which makes any such system out of the question.

We may also grant that in view of the varying degrees of inflation and of economic disruption that have plagued the different European economies, reliance upon price adjustments in an open international system *at present exchange rates* would not work. This does not mean, however, that a *major* price adjustment such as is entailed in devaluation would not correct the situation. The phenomenon which has exerted perhaps the most disorganising effect on European trade has been inflation. This now appears to be coming to an end. Trade is also returning more and more to the prewar pattern, reflecting enduring bases of international specialisation with their roots deep in the past. In these conditions, a revaluation of currencies would be appropriate (and indeed has now taken place).

But what about the danger of setting off a spiral of inflation and devaluation? Devaluation will certainly tend to raise the price of imports. If social and political conditions make wage increases unavoidable, then the spiral will appear. It can only end, as it has on numerous occasions in the past, in currency collapse and the introduction of a new currency whose international value reflects the country's international competitive status. Social and political aspirations cannot fly in the face of hard economic facts. If the productivity of a country's labor is low, the attempt to charge other nations a price which is out of line with that productivity (as by the maintenance of an overvalued exchange rate) will present that country with a chronic balance of payments deficit. For no nation can continuously buy abroad more than it sells, and it can sell a large volume of goods and services only if it prices them attractively.

Unpalatable as it is to say so, the hardships that go with devaluation and acceptance therewith of a reduced standard of living cannot be avoided. The "solution" of the balance of payments problem by arbitrary control implies just as much austerity as goes with devaluation, and probably more. For—unless the elasticity of foreign and home demands is almost unbelievably unfavorable—devaluation means some increase in the foreign value and therefore in the volume of both exports and imports. There will be more to go round. Continued overvaluation supported by exchange control and quantitative restrictions, on the other hand, means restricting imports to the low level permitted by overpriced resources. Any gain, therefore, that might be realised by a selective (and discriminatory) reduction of imports is likely to be more than offset by a decline in the overall volume of imports—not to mention the further offset involved in the resources devoted to the maintenance of an extensive system of foreign trade controls.

If this argument is sound, it means that the basic aims of the ITO and the IMF are correct—*including* balance of payments adjustment (when appropriate) via devaluation. They seek to restore an open trading system based on free multilateral payments, which will make possible rising standards of living founded on the fullest practicable realisation of the advantages of international specialisation. Even Sir Hubert agrees that these aims are desirable. He objects, however, to devaluation as a means of restoring equilibrium and thus making attainable a multilateral system of payments. But this is probably the key to free multilateral payments, which in turn is the key to free and expanding trade. Sir Hubert, however, chooses to throw away the key and leave the door locked.

Two special aspects of Sir Hubert's argument require further comment. These have to do with the adoption, in the Havana Charter, of the principle of reciprocal concessions in tariff negotiations, and the principle of permitting tariff preferences only as interim arrangements preliminary to the formation of a customs union (or free-trade area). I have long felt that these principles were mistaken. The United States could contribute much to the solution of today's and tomorrow's balance of payments problems if it undertook a unilateral reduction of its tariff. Naturally, this would require measures to soften the shock of adjustment and to facilitate adaptation to the changed

conditions. But to insist on a *quid pro quo* for every concession in duties, and to confine our concessions to reductions which *must be* relatively innocuous—as is implied in the escape clause providing for their withdrawal in case of serious damage to vested interests—accords ill with our present and foreseeable international position.

As to preferences, the only objection to their continuation that to me makes sense is that they generally lead to an increase in barriers to trade with outsiders. If preferences were permitted, subject to the proviso of the Charter that the approach must be via duty reductions to insiders rather than increases to outsiders, but without the requirement that any new preferential arrangement must be as a step toward complete customs union, it would seem that the rules of international good conduct were not being infringed. Like Sir Hubert, I can make nothing whatever of the logic which permits complete but not partial preference between two or more countries.

P. T. Ellsworth*

* The author is professor of economics at the University of Wisconsin.

Truth and Relevance at Bay

Since, to our sorrow, Frank Graham is no longer on hand to defend himself (otherwise he would need no help from this writer or anyone else), another may be allowed to take note of some features of Professor Lincoln Gordon's reply to his review of Barbara Ward's *The West at Bay* ("Libertarianism at Bay," this *Review* for September, 1949). I wish to speak of issues, not of personalities. No one need begrudge Mr. Gordon his little exercise in self-expression, at least no one about to indulge in the same sport. Since he has introduced the "issue" of manners, I may express agreement that it *does* seem like "egregious rudeness" on the part of the "libertarians" to keep telling literate adults that two and two are four and effects (usually) follow causes, and worse, it is not always done with the tender patience appropriate to kindergarten teaching. The *tu quoque* is usually true, if rarely polite or effective; and it *might* be replied that when one of Mr. Gordon's professional status in another "science" uses the pages of a professional economic journal to read a Sunday-school lecture to one of Frank Graham's age and achievements, ending by diagnosing the author, *inter alia,* of *Social Goals and Economic Institutions,* as not knowing down from up, "one" (at least) "can hardly escape" being reminded of a venerable philosophic principle, that 'you have to draw a line somewhere.' Perhaps I may venture to ask Mr. Gordon, quite humbly, for instruction on the etiquette of discussing policies with opponents whose whole argument explicitly rests on the assumption that arithmetic and predictable consequences do not matter if the heart is right and one is tolerably well read in history. However, it is weightier matters that I really wish to notice.

Mr. Gordon starts off by still insisting that the Ward volume is "on balance a good book," in opposition to Graham's characterization as "subtly dangerous and subversive." I shall not argue that it is not a "good book." There are many ways in which a book may be good, and several of these goodnesses are entirely consistent with being dangerous, and subversive of the values on which

a free society must be founded. Indeed, it is much easier to achieve literary charm if one does not bother too much about mere truth and relevance. Poetry and fiction are usually more pleasant reading than information and analysis. A fine novel, or lyric poem, or epic, may be written about a plague, asserting everything false about the nature of the disease, its causality, and effective treatment. And "these days," it is in no way surprising, to an economist, that a professor of a sister social "science" finds it "breath-taking" when Graham states the truism that a shortage arises from price-fixing. Rather, it is a phenomenon discouragingly familiar. The professor is merely echoing the man-in-the-street, and the mine-run of politicians, publicists and commentators. Such "thinking" is the despair of the teacher of elementary economics. If educated people can't or won't see that fixing a price below the market level inevitably creates a "shortage" (and one above it a "surplus") it is hard to believe in the usefulness of telling them anything whatever, in this field of discourse. (And "of course," in an open market there can be neither a shortage nor a surplus "at the price," while "absolutely," relative to need, there is *always* a shortage, of anything that is of economic concern—though sellers will find a surplus!) One asks what is the chance of securing consideration of the economic problems that really are problems. (The reference is only to Britain's "dollar-shortage," not to the complex of its economic difficulties; but in fact, most of the country's "terrible situation," of which we hear so much, is the result of inept governmental "planning," interfering with economic liberty, or of failure to take positive action where needful to preserve freedom.)

Most interesting of all is the "line" taken in Mr. Gordon's final paragraph. Such toplofty preaching of platitudinous profundities about the deeper-historical-forces and the higher-spiritual-values has exactly as much relevance to ordinary concrete economic issues as it would have to an outbreak of typhoid spread from an infected water supply. This sort of business from serious writers is meat and drink for the demagogue; and the most dangerous and subversive demagogues are the "honest" ones, those of pious intentions. Unfortunately (human nature being what it is) a free society requires intelligence, in the prosaic, "dismal-science" sense of literal objectivity and pertinence. Problems of means and ends are not solved by romancing about them, or moralizing, in whatever pretty or edifying phrases. Better let them alone, since bad policies are worse than none. It is a sad truth that one main enemy of sound economic action is precisely the deeper historical forces and higher spiritual values—as expounded by such journalists as Miss Ward and such social scientists as Mr. Gordon—together with the bulk of our sociologists, historians, etc., and "of course" the preachers and moralists and the literary intelligentsia. In short, practically everybody, except a few hold-over economists from the age that believed—if somewhat naïvely—in truth and freedom. A thinning rank, whose views no doubt are, as Mr. Gordon amiably says, "of little moment so long as everyone recognizes that the whole world is out of step except the libertarians"—and, with him and Miss Ward, elects to swim with the current. *That* is the meaning of "down," in relation to swimming, and Frank Graham did not need Mr. Gordon's tutoring

on the point; he merely chose to swim *against* the current. Foolishly? Perhaps. But he could not see either freedom or prosperity in passing laws and appointing policemen to keep people from acting in accord with their mutual and common interests—dismissing opponents by saying that *they* believe in original sin.

Apparently it *is* the direction of the current, for the visible future. As has often been observed, "progress" occurs in waves, recession alternating with advance; and economic thinking and policy are in a phase of deep recession at this time. After an epoch of venturing and achieving, we see a mania for security, and insistence on the right to consume regardless of production, in a world which just isn't built that way. Until this phase passes, one who points out that any well-intentioned but palpably stupid policy will have results opposed to those foreseen or desired may expect to be classed as opposed to all remedial action. And this regardless, also, of all endeavor to find and point out remedies effective within the possibilities and not clearly worse than the disease. Truth, even simple arithmetic, and relevance, will seem immaterial. But, it was so for ages with respect to magic and witchcraft in medicine and dealings with the physical world. (One may doubt whether today, in any country, the total of what is done to "heal" actually does more good than harm.)

Let me repeat that I am not concerned with personalities; but the issue between Ward-Gordon and Graham is large and serious, and hard to discuss. I must speak plainly. What can a serious economist do but "fight back" when outsiders in high places use their persuasive talents to tell the world that in explicit discussion of economic policy it is unimportant how bad is the economic reasoning or recommendations, if only an author shows "an understanding of the moral foundations of western civilization"? Gordon does not specify; that might suggest issues! I must mention the fact that much of what passes current, even as "sacred" in this connection is a survival from the Dark Age in Europe; an age of despair, when men's fundamental beliefs and morality were escapist, supernaturalist, millenarian, ascetic or supinely submissive, and obscurantist; when in particular the "right" use of wealth was to give it to the nearest pauper (to be dissipated) or, better, to some ecclesiastical outfit pretending to represent the pauper interest and ideal. Our civilization is based on antithetical values of freedom and progress through intelligence, with as much justice and humanitarianism as a complex organization of mere human beings can bear—and at worst far more than were practiced in the monastic age. Only if we are to return (in pretense) to an ethic of mystical or sentimental absolutes ("poverty, hunger and dirt") in which no modern mind can really believe, do we have a choice between our "moral foundations" and the arithmetic of intelligent cooperation, as embodied in the principle of comparative advantage.

Broadening the subject slightly, Gordon's commendation of *The West at Bay* as a good book is of a piece with the current "furor" for making "Great Books" the heart of liberal education. Like other simple formulas, this is not without merit, but raises rather than solves problems, notably where man and human relations and the social order are educational subject matter. If

our society is to be "free" in the minimal sense of not drifting rapidly into a brutal authoritarianism, it will be imperative for educators in this area to distinguish sharply between different and often conflicting species of excellence in literary composition. One sees no clear recognition of this fact, particularly in the propaganda centered on the Great-Books slogan. Mr. Gordon hardly refers to literary quality—quite as important as edifying morals and which, also sharing the emphasis on antiquity, conflicts widely and directly with "truth and relevance." Much effort, subtly directed, is needful to give the young (or the "adult") necessary historical background and a sense of culture continuity, without teaching *too* much that, however true or medicinal it may once have been, is now *too* false and pernicious for action, though it appeals strongly to our primitive emotions, including those we call our higher values.

FRANK H. KNIGHT*

* The author is professor of social sciences and philosophy at the University of Chicago.

Inflationary Effects of a Balanced Budget Under Full Employment

It has been shown by Haavelmo,[1] in an article entitled, "Multiplier Effects of a Balanced Budget," that an increase in government expenditures, financed by an equal increase in taxation, will increase the level of the gross national product by the same amount. It was shown furthermore, by Haberler[2] and others, that, if the tax is levied before the making of the additional expenditure, the effect on income, in the long run, will be the same. In the case where expenditures increase before taxes, the final level of income is reached almost immediately: in the case where taxes are raised first, and expenditures afterward, the final level of income is approached asymtotically over a period of time.

The purpose of this note is to show that under conditions of full employment the multiplier, which in Haavelmo's terminology is equal to one, will be substantially greater than one. But first we shall summarize his argument.

The formula for disposable income to the private sector of the economy is given by:

$$Y = W + D + I + R + TP + S_b - T_d,$$

where Y is disposable income including corporate savings; W is wage payments; D is dividends; I is interest payments to individuals; R is rent; TP is transfer payments; S_b is corporate savings; and T_d is direct taxes.

Assume that the consumption function is linear and identical for all individuals, so that there will be no effects from the redistribution of income that may result from the imposition of taxes and their expenditure. There will be no shift in the consumption function. If the government increases expenditures, thereby increasing the public's income, and immediately takes

[1] Trygve Haavelmo, "Multiplier Effects of a Balanced Budget," Econometrica, Vol. 13, 1945, pp. 311-18.

[2] Gottfried Haberler, "Multiplier Effects of a Balanced Budget, Some Monetary Implications of Mr. Haavelmo's Paper," Econometrica, Vol. 14, 1946, pp. 148-51.

away the additional income through taxes, the level of disposable income will remain unchanged. But gross national product will have increased by the amount of the increased expenditure.

The formula for the gross national product is as follows:

$$GNP = C + B + G + F,$$

where C is consumption expenditures; B is business expenditure on capital account; G is government expenditure; and F is net foreign investment. Since disposable income is unchanged, there is no reason for C, B, or F to have altered. The component G has increased, and the level of economic activity, measured by GNP, has increased correspondingly. The total demand for goods and services has risen. But for the multiplier to be one, we must make an additional explicit assumption. We must assume that there are unemployed resources of all kinds, and that, as income increases, there is no rise in the prices of important goods and services. There is no rise in the cost of living for the typical consumer. Once the level of full employment has been reached, any further increase in the level of government expenditure will lead to a bidding up of prices and a diversion of resource to the government through forced saving.

It is here that the multiplier becomes greater than one. Disposable income in money terms has remained unchanged, but *real* disp. income has fallen. It is true, in general, that people do not reduce their consumption by the amount of the decline in their real income, that is, the marginal propensity to consume in real terms is less than unity. In other words, consumers resist the attempt of the government to divert resources away from consumption to government use. The rise in price level and GNP needed to obtain, say, a ten per cent reduction of real consumption must therefore be greater than ten per cent. Total income generating expenditures by the government and the private sectors of the economy combined will rise in money terms by more than the increase in spending by the government.

It is, moreover, a virtual certainty that the marginal propensity to consume in real terms is very small over short periods. When it is less than the average propensity, the average propensity must rise as real income falls. This takes place whenever the consumption function intersects the Y-axis and is not concave upwards.

Assuming that the real marginal propensity is normally less than the average propensity to consume, we find that *in money terms* each rise in the price level causes an upward shift in the consumption function. The proportion of disposable money income consumed increases for any given level of income. Each reduction in real income means a sliding backward along a consumption function measured in real terms; in money terms it means an upward shift of the function. Every rise in the price level, given the level of money income, results in an increase in dollar outlays for consumption.

Through the initial rise in consumption expenditures the amount of income generated and the price level will rise further. Each successive rise in the price level will cause a further upward shift of the propensity to consume,

which in its turn leads to more income-generating expenditures. The smaller is the marginal propensity to consume in real terms, the greater is the price rise necessary to restore equilibrium. An attempt by the government to maintain the higher level of expenditures in real terms, by carrying through projects no matter what the money cost, and by raising the pay of its employees in pace with the rising price level, will, of course aggravate the rise in prices and money incomes. If the credit system is sufficiently elastic, an inflationary spiral may result. Each successive reduction in real income is counteracted by additional income-generating expenditures which defeat the attempt to take away goods and services from consumers. This is true even though tax collections increase *pari passu* with expeditures—the rates could even be reduced, because of the progressive elements in the tax structure.

In order to increase the level of government activity while avoiding the inflationary effects that would result, it is necessary to increase tax receipts by more than twice the increase of expenditures. Let us trace step by step why this is true: An increased outlay by the government with a balanced budget requires an addition to tax receipts by the same amount. But this would leave disposable income unchanged, and, as shown above, we would get an increase in consumption expenditures because real income has fallen. In order to avoid inflation we must reduce consumption expenditures by as much as government expenditures increase. To do this, it is necessary to raise taxes by at least as much again as government expenditures.

In addition, we have seen that the marginal propensity to consume in real terms is less than one and is virtually certain to be less than the average propensity. This means that consumption outlays in money terms will never fall by as much as disposable income. We must, therefore, take away more income than the desired reduction in consumption spending, and this means increasing taxes by more than twice as much as the planned increase in government expenditures. In other words, we must increase the fiscal surplus (or reduce the deficit) by more than the increased expenditures. It is only in this way that an expansion of government activity can occur under full-employment conditions without causing an inflation of prices and incomes.

In the light of this analysis, it might be concluded that the federal budget proposed for the fiscal year 1949-50 would have inflationary tendencies, providing that we are still at the full-employment level.

FRANZ GEHRELS*

* The author, instructor in economics at Stanford University, is indebted to Professor Moses Abramovitz for help in clarifying the exposition in this note.

Federal Reserve Policy and Federal Debt: a Comment

Mr. Chandler's analysis of Federal Reserve policy and federal debt in this *Review*[1] rues the fact that the Federal Reserve, by its policy of supporting government securities in the open market, has deprived itself of its traditional

[1] *Cf.* Chandler, L. V., Federal Reserve Policy and Federal Debt, *Am. Econ. Rev.*, Vol. XXXIX, No. 2 (Mar., 1949), pp. 405-29.

control over the supply of money. He argues that the highly elastic money supply resulting from this policy is not simply inflationary, but, in addition, "cannot fail to be an unstabilizing factor in an economy in which expectations concerning the marginal efficiency of capital fluctuate widely relative to the propensity to save."

The purpose of my remarks is not to differ with Mr. Chandler over the elasticity given to the supply of money by the commitment to support government bonds. Rather, I would suggest that the support policy is a necessary evil—to the extent that it is an evil—and that the difficulties it aggravates may be better handled through nonmonetary measures.

First, as to the justification of the support policy. Mr. Chandler is not convinced by the argument that pegging is necessary to protect holders of government securities against capital losses. He believes that these holders may not necessarily deserve such protection. Whether or not there is any moral basis for this protection, the fact remains that all financial institutions and many individuals maintain a very considerable proportion of their portfolios in the form of marketable government securities.

These governments were purchased to be used as a liquid secondary reserve (during the war period and up to the middle of 1947, even longer-term bonds were used for this purpose) and as the safest investment available. Regardless of any moral obligations to keep these securities at par or above, one cannot but wonder what the result would be if all investors showed a substantial book loss on their safest and most liquid asset. Indeed, with the widespread ownership and important rôle of governments in investment portfolios, the panic might well be far greater than it was after World War I, and could not help but have broad repercussions extending beyond the particular investors involved.

Furthermore, since sale of these securities would transform a book loss into a real loss, the liquidity of these investors and institutions would be seriously impaired. The effective liquidity of government securities would vanish. This does not raise an academic issue. The assurance of shiftability which government securities provide to a large portion of banking assets is a protection of prime importance for the ordinary borrower or privately marketed security. In the past, monetary stringency was always associated with a debilitating squeeze on private borrowers, a factor which greatly intensified the crisis and helped to push us into a cumulative downward movement. Under present circumstances, the first reaction in the event of stringency would be to unload governments on the Federal Reserve, and private borrowers would not have undue pressure brought upon them.

Mr. Chandler argues that investors could be protected anyway if the Treasury refunded outstanding issues at higher coupon rates; the new bonds would be quoted at par in line with the tighter monetary conditions which the Federal Reserve would promote. Does Mr. Chandler really mean to say that nearly $160 billion of marketable government debt could be refunded in one fell swoop with higher coupons without throwing the entire securities market into complete chaos? And how does the Treasury choose the correct moment for this unprecedented operation, as a practical matter? Finally, even if the

operation could be proven practical, the Treasury cannot legally call outstanding bonds until their call dates, which go out to 1967 on the longest term bonds; and a process of market repurchase by the Treasury would raise bond prices far beyond anything Mr. Chandler has criticized.

Mr. Chandler mentions that the proponents of the support program believe that a break below par in marketable bond prices might induce wholesale redemptions of savings bonds, in effect a demand obligation of the Treasury. However, he only mentions this argument, and makes no effort to break it down in the course of his article. Yet this danger is a very real one. The average individual who holds savings bonds would not understand that a 3 per cent yield on the marketable 2½s of 1967-72, for example, would still leave the 2.9 per cent yield on his ten year Series E Bond in a favored position. He would only see that governments were selling at less than 100, would fear that the credit of the government and the financial soundness of his bank were impugned, and would rush to the bank to cash his savings bonds and perhaps his bank accounts as well. A refunding problem of first magnitude in an unfriendly market would be forced upon the Treasury; substantial Federal Reserve support would doubtless be necessary, and the result could be far more inflationary than anything Mr. Chandler has seen so far.

He goes on to argue, however, that, even though the effects of a drop in government bond prices might not be wholly salutory, the disadvantages would be greatly outweighed by the anti-inflationary effects of a tighter money supply and higher interest rates. In his opinion, some restriction of private investment was neecssary after the war, in view of the high propensity to consume and heavy government expenditures. Granting his premise that such restriction would have been desirable, one must nevertheless question the efficacy of the blunt, broadside effect of credit restriction in achieving the objective with a minimum of disturbance. This problem could have been solved, if necessary, with greater efficiency by the retention of non-monetary wartime controls over the allocation and distribution of materials, so that high priority, essential projects could have been carried out, with the race tracks and swanky apartment houses postponed for a later date. Credit restriction is anti-inflationary, of course, but its use on a substantial scale after the war would have been completely non-selective and would not necessarily have curtailed private investment in the most desirable manner.

Mr. Chandler concedes that some support by the Federal Reserve may be essential and even desirable. However, he believes that the objective of the central bank should be "orderly adjustments of security prices and yields . . . in order to establish higher yields but still prevent 'disorderly' movements." This is far easier said than done, as the actual events themselves can prove.

The heaviest periods of Federal Reserve support were from November 1947 to February 1948 and from July 1948 to November 1948. In both of these periods, and particularly the latter, the amount of support required was greatly enhanced by panic selling, provoked by fear of further price declines. In the seven-week period from November 5 to December 24, 1947, the Federal Reserve made net purchases of bonds of $1,674 million. On the last day of that

period, the pegs were dropped sharply, and this induced heavy panic selling by holders who feared that additional reductions in the pegs were probable. As a result, net Federal Reserve bond purchases in the following three weeks were only $37 million less than they had been in the preceding seven weeks.

Heavy selling during the fall of 1948 was also stimulated by the discussion raging in financial circles over the possibility that the pegs might be removed altogether; immediately after the election the selling dried up, when investors decided that the returning administration would favor retention of the pegs.

The government bond market is, in fact, too sensitive for "orderly adjustments" to be feasible over any significant range. As the pegs would gradually be lowered, the Federal Reserve would find itself confronted with ever heavier selling pressure at each step. Such an "adjustment" could hardly merit the adjective "orderly." Indeed, the inflationary effects of such large-scale Federal Reserve open-market buying would be much greater than if the authorities explicitly promised that the 2½ per cent long-term anchor would be protected.

The easing of inflationary pressures in 1949 has made the Battle of the Pegs a somewhat academic issue for the present. Its lessons, however, should be relevant for the future. I think we must have learned that monetary policy is too blunt an instrument by itself for effectively controlling inflation in a period of widespread shortages of goods; we have devised more effective and selective non-monetary measures which can do the trick better, as the wartime experience suggests. One cannot, therefore, easily ignore the unsettling effects of a money squeeze which sharply depresses government security prices.

PETER L. BERNSTEIN*

* The author is the economist of the Modern Industrial Bank, New York City.

Gold and International Equilibrium

Metzler's excellent chapter on international trade theory in *A Survey of Contemporary Economics* calls the "modern" theory of the gold standard incomplete.[1] By this he means that the reactions it describes probably are insufficient to restore an equilibrium once it has been disturbed. If country A increases its imports from B, a deficit occurs in A's balance of payments. Irrespective of whether the deficit is initially financed by flows of gold or short-term capital, under the modern theory income and employment expand in B's export industries. Secondary spending of these incomes stimulates output of consumption goods in B, which, in turn, stimulates investment. As incomes rise in B, so do imports. The initial rise in exports thus is partially or wholly offset. However, "the conclusion of most economists seems to be that, except under unusual conditions, the adjustment of a country's balance of payments by means of income movements is likely to be incomplete."[2] Therefore, "the new explanation . . . normally accounts for only a part of

[1] Lloyd A. Metzler, "The Theory of International Trade," in Howard S. Ellis, ed., *A Survey of Contemporary Economics*, (Philadelphia, 1948), Chap. 6.

[2] *Ibid.*, pp. 219-20.

the adjustment and thus constitutes a theory of disequilibrium as well as a theory of equilibrium."[3]

Metzler's account implies, albeit in a backhanded way, that the classical role of gold inflows in increasing bank reserves, lowering interest rates, and increasing loans and prices is almost completely omitted from the modern theory. Thus he says, "Perhaps the most important single feature of the new concept is its comparative independence from banking policy."[4] The income effects continue to perform their equilibrating rôle even though the central bank offsets the gold flow. "Unless domestic investment were highly sensitive to a change in interest rates, . . . such action would not stop the rise of employment which was initiated in the export trades, and the adjusting process would proceed as before."[5] This almost complete rejection of the classical mechanism apparently rests on two considerations: (1) belief that investment is insensitive to interest rates; and (2) belief that international demand is inelastic to price changes in the short run.

Since the classical mechanism is rejected and income effects are incomplete, the way is open (though Metzler does not say so) for a chronic shortage of one currency such as dollars even under gold standard conditions. This raises an interesting question: why was the gold standard so successful prior to World War I? Is there not something more to the gold standard mechanism than the modern theory describes, something which in the absence of rigidities produces either complete equilibrium or at least an oscillation about the equilibrium position?

In my opinion, a part of the classical mechanism must be retained in gold standard theory. While I share the conviction that in the short run investment is insensitive to interest rates and demand is inelastic with respect to prices, the long run is a different matter. An addition to gold reserves in the pre-1914 era may not have increased investment and prices immediately, but subsequent business cycle expansions resulted in greater increases of bank deposits and higher money incomes and prices than would otherwise have been the case.[6] In the nineteenth century, business booms, at least in the United States, almost invariably resulted in money stringency, indicative that expansion of credit by the banks was limited only by their reserves.[7]

[3] *Ibid.*, p. 220.

[4] *Ibid.*, p. 216.

[5] *Ibid.*, p. 216.

[6] It is conceivable that in the United States this mechanism may have partly worked itself out as an income effect. Immigration tended to increase in prosperity, diminish in depression. An accrual of gold may have made for longer prosperities (on this point see my article, "The Long-Wave Depression, 1873-97," *Rev. Econ. and Statistics*, Vol. XXXI, No. 1 [Feb., 1949], pp. 69-73) and therefore more rapid immigration. Hence, the rise in money incomes may have represented partly an increase in real incomes; and the increase in real incomes would have expanded imports irrespective of price changes. If this is so, my attempt at partial defense of the classical mechanism as opposed to income effects does not go as far as the text above indicates.

[7] The situation now may be different. At the time of writing, the postwar inflation appears to have run its course even though excess bank reserves in the United States are in the neighborhood of a billion dollars. Hence, gold flows into the United States even in

As Metzler points out, evidence of inelasticity of international demand is entirely short-run. Probably in the long run consumers and producers adapt themselves to the price changes, so that demand is more elastic. Therefore, the inflow of gold in pre-1914 times eventually increased imports and decreased exports in the classical manner. Although this part of the mechanism would usually be ineffective in the short run, in the long run it served to prevent a chronic disequilibrium in which one country tended to gain the world's gold supply.

It follows that neutralization of gold flows by central banks has not entirely lost its significance as a blow to the operation of the gold standard. It is true, as Metzler's quotation from Whale indicates, that the importance of "observing the rules of the game" has declined in our estimation as a result of the new theory.[8] But the dilemma faced by monetary authorities under the gold standard between the requirements of internal and external equilibrium was a real one.

In the words of Metzler, "the pendulum has now swung too far in the anti-classical direction."[9] The classical theory of gold flows and price changes must not be abandoned as of little importance.

RENDIGS FELS*

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the long run may not affect prices and money incomes appreciably. Excess reserves at the end of a boom are not decisive evidence, however; but in any event offsetting operations by the central bank would prevent gold flows from performing their equilibrating function.

[8] *Op. cit.*, p. 216.

[9] *Ibid.*, p. 254.

* The author is assistant professor of economics at Vanderbilt University.

Planned Economy in Norway: Comment

While Dr. L. R. Klein[1] presents a clear and interesting outline of the system of "national budgeting" in Norway, at least two of his views regarding the general implications of the Norwegian experiment appear to be questionable.

At one point it is stated, for example, that: "one of the most evident and most striking features of the Norwegian economy is its stability since 1945."[2] When speaking of stability, Klein is primarily concerned about price stability and the protection of the real income of workers. Average hourly real wages in industry rose about 20 per cent between 1940 and 1947.[3] Since it is highly probable that average productivity fell during this period,[4] it is evident that a size-

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[1] "Planned Economy in Norway," *Am. Econ. Rev.*, Vol. XXXVIII, No. 5 (Dec., 1948), pp. 795-814.

[2] *Ibid.*, p. 810.

[3] *Statistisk—Økonomisk oversikt over året 1947*, Norges offisielle statistikk, X—143 (Utgitt av Statistisk Sentralbyrå, Oslo, 1948). For information on hourly wages, p. 40; and retail prices, p. 98. See also, International Monetary Fund, *International Financial Statistics*, May, 1949.

[4] The Economic Commission for Europe, *Economic Survey of Europe in 1948*, U.N. pub. (Geneva, 1949), Table 4, p. 7. Average output per man employed during 1947 was indicated as 85 per cent of the 1938 level. No man-hour figures appear to be available.

able "inflationary gap" has developed within the economy. The low level of postwar interest rates and the very high level of investments have tended to sustain this gap.[5]

The gap has undoubtedly helped to check the expansion of export volume, which has remained at about 82 per cent of prewar during 1947 and 1948, when industrial production was 15 to 25 per cent above prewar levels, and has thereby been fundamental to the magnitude of disequilibrium in the balance of payments.[6] The high volume of imports necessary to a realization of the ambitious investment program has been the other decisive factor. Finally, a deterioration of the terms of trade with regard to freight income has also been of importance. Postwar deficits in the current balance of payments have averaged nearly 1 billion kroner ($200 million dollars) since 1946[7]; about half of this annual deficit could be attributed to the low volume of postwar exports.[8]

Thus, granting that price stability[9] has been attained and that an increase in real wages[10] has been maintained, it is not at all clear that a planned economy such as Norway's does not substitute one form of instability (that of the balance of payments) for another form of instability (that of domestic prices). Instability in the balance of payments, however, may have far more serious implications for a small country than does domestic price instability. In any case, one should not be deceived into thinking that once the magic wand of economic planning is waved, the problem of economic stability somehow disappears.

In support of this view, let me first quote certain conclusions concerning economic development in Norway during 1947, which are contained in the "Statistical Economic Survey" issued in connection with the government budget during January, 1948:[11]

There is a continuing deficit of considerable size in the national budget which

[5] The costs of German occupation were the important prime source of the gap. Price subsidies have amounted to about a quarter of current budgetary expenditures. While gross domestic investments have amounted to about 35% of G.N.P., the long term rate of interest was lowered from 3.4% to 2.5% in connection with government debt conversion during 1946. The low rate of 2.5% has been sustained.

[6] *Statistik—Økonomisk oversikt over året 1948* (Oslo, 1949). Reference to source of statistics given.

[7] *Økonomisk Revy,* Norsk Bankforening, No. 2, 1949, p. 3.

[8] *Ceteris paribus,* the current deficit would have been about $80 million a year less had export volume attained a prewar level during 1947 and 1948. Although a deficit is normal for Norway in view of postwar reconstruction requirements, it appears that direct controls and repressed inflation have diverted output from export to the home market. Export volume has, therefore, lagged far behind the growth of national product, relative to prewar, though a roughly parallel development is vital to long-run international stability and the sustenance of a high level of output.

[9] Since it was attained by means of price control, it may only imply price rigidity.

[10] *Editor's note—* A Norwegian critic of Klien, whose communication could not be published, queries the reality of the increase in real wages due to the non-availability of many consumer's goods.

[11] *Statistik—Økonomisk oversikt over året 1947, op. cit.,* pp. 94-95. Translated by the writer. A budget surplus was developed during 1948.

together with an increase in lending and the large nominal income receipts of the population has led to the growth of an inflationary gap. . . .

It is important to be aware of the fact that we, despite the general production advance since the end of the war, can not be considered to be enjoying a stable period with a uniform prosperity. The economic situation in Norway today is to a high degree unstable. Since production in 1947 did not lie appreciably above the prewar level, this higher level of production could only be sustained by a considerable import balance of trade. This import balance . . . has in large part been financed with the country's exchange reserves and by borrowing. . . .

At the conclusion of 1947 one is faced with the situation that an appreciable portion of the disposable exchange reserves have been utilized at the same time that authorities had exhausted most possibilities of obtaining additional credit. One has thereby arrived at a very serious foreign exchange situation. . . . In case further credits can not be obtained from abroad, it might be necessary to bring about a more drastic reduction of imports than that effected in connection with the reorganization of exchange policy in September . . . but should the situation arise in which it becomes necessary to reduce the supply of imported raw materials further, it may be difficult to prevent the growth of unemployment in industry.

The view stated in this official publication is quite different from that of Klein. The situation is viewed as essentially unstable rather than stable. Serious attention is paid to the difficult foreign exchange situation and the implications for domestic employment of the necessity further to reduce imports.[12] Klein found that the 1947 import surplus "in no way caused an economic crisis."[13] To him the fault was administrative and the result of forecasting errors; it could be rectified in the future.[14] The subtle underlying factor overlooked by Klein is that while no economic crisis may have as yet arisen, it is only because Norway has been able to expend exchange reserves and obtain foreign loans. Once foreign aid, credit resources, and foreign exchange reserves are exhausted, the income received from Norwegian exports and shipping will be an important factor in determining the level of national income.

The situation in Norway, and for somewhat similar reasons in Sweden also, is, at least potentially, quite unstable.[15] The question therefore remains, and a most important question it is indeed with regard to the ultimate success of E.R.P., to what extent small democratic countries such as Sweden and Norway, whose standard of living is highly dependent on foreign trade, can achieve a volume of export trade by means of direct controls (prices, interest rates and the allocation of supply being subject to control in both countries) that is compatible with equilibrium in the balance of payments at a level of

[12] The volume of imports is naturally of far greater significance to the level of production and real national income of a small country, than of a large country with adequate natural resources of all types.

[13] "Planned Economy in Norway," *op. cit.*, p. 806.

[14] *Ibid.*, pp. 806, 807.

[15] It should be pointed out that during 1948 and 1949 a large portion of the international deficits of Sweden and Norway are being covered by E.C.A. assistance. Both countries have drawn heavily in the past on their gold and foreign exchange reserves to finance their international deficits. While Sweden did not suffer a severe impairment of her capital equipment during the war, as Norway did, she has also experienced repressed inflation and an abnormally low volume of exports in relation to imports and real national income.

imports that will permit retention of present full employment levels of activity and a normal growth of productivity. Can these countries substitute direct controls for a free-price system and still bring about international adjustments with sufficient rapidity to meet sudden changes in the international outlook? Will not the persistence of repressed inflation (along with the controls necessary to repress inflation) interfere with the proper allocation of resources in this connection, prevent adequate price flexibility, and inject a high degree of inelasticity in the export supply curve? The low volume of postwar export in both countries[16] raises serious doubts, especially in view of the fact that international demand conditions have in general been very favorable for both countries since the end of the war. In addition, how will these countries meet the threat of increasing international price competition, especially in dollar markets?[17] The critical nature of these problems has been and continues to be disguised by the prevalence of foreign disinvestment, loans, and American aid.

Another general conclusion drawn by Klein was that the clause of the Bretton Woods Agreements requiring the abolition of import and exchange controls by 1952 was particularly unsatisfactory.[18] When considering Norway he says:[19] "Either the Bretton Woods Agreements must be modified (or ignored)or some round-about method adopted to circumvent the Agreements. One method would be to nationalize all foreign trade."[20] It appears to the writer that Dr. Klein has failed to prove his case; he has merely intimated what is self-evident, that the provision is incompatible with the retention of the present system of direct controls in Norway. But is not this essentially begging the issue? The writer has pointed out that the economic stability attributed to Norway by Klein may be more apparent than real, that in fact it has been sustained by a high volume of capital imports. Economic stability, if it is to be given a dynamic significance, must in the long run be measured in terms of the growth of productivity and internal adaptiveness to external change, as well as in terms of the level of employment and real wage income. The Norwegian economy has still to prove itself with regard to the first mentioned factors; a small country could suffer considerably in a world rapidly returning to price competition, if it lacked stability so defined.

[16] During 1948 industrial production was 143% and 125%, export volume 79% and 82%, of the prewar levels in Sweden and Norway respectively. Prewar = 1938. Source: International Monetary Fund, *International Financial Statistics*.

[17] For the above mentioned reasons, among others, one must be skeptical as to how much benefit can be derived from currency devaluation in a controlled economy, where repressed inflation leads to an excessive domestic use of domestic output. The threat of nationwide wage increases to offset resulting increases in living costs (thereby threatening domestic price and wage stabilization) and the restrictive provisions of bilateral trade agreements must also be considered. The issue, however, is too involved to be discussed within the limited scope of this note.

[18] "*Planned Economy in Norway*," *op. cit.*, p. 814.

[19] *Ibid.*

[20] According to Professor Wilhelm Keilhau of Oslo, Norway, the greatest success in postwar reconstruction has been attained with the mercantile marine, the only sector where private initiative was given a free hand. See "Main Trends in Norway's Economy," *Lloyds Bank Review* (July 1948), p. 31.

The writer suggests that, because of the flexibility of a free-price economy and the possibilities for increased productivity permitted by specialization under free trade, such small nations may have an even greater stake than their larger neighbors in a return to free, multilateral trade.[21] While the level of home demand is of decisive importance (and the volume of foreign trade of secondary significance) to a large country in maintaining full employment and a high standard of living, it is clear that to a small country, lacking many essential resources, the volume and composition of foreign trade are also of primary importance, regardless of the structure of the economic system.

Such small countries as Norway and Sweden may have found a temporary solution to the "classical" problem of maintaining an adequate level of effective demand at home—though the solution has involved the existence of repressed inflation—but have they found a solution to the problem of obtaining an adequate volume of supply without resorting to capital import or foreign disinvestment? This latter aspect is also fundamental to the maintenance of high living standards and full-employment levels of activity.

When judging the stability problem of a small country, international considerations are as fundamental as domestic. In fact the two are virtually inseparable.

RALPH E. HOLBEN*

[21] The interwar years provide ample evidence of the competitive disadvantage suffered by small nations which engaged extensively in bilateral trade.

* The author, who is on the staff of the Economic Cooperation Administration, is expressing personal views and not those of the organization with which he is associated.

The Least Cost Point: Reply

In the December issue of the *Review* Professor Eiteman attempts to rebut my criticisms of his earlier article attacking the validity of marginal analysis.[1] He has indicated precisely what he meant by capacity and has in some respects clarified his position, but unfortunately he has raised more problems than he has solved. These problems are so numerous that a complete examination of them would take more space than their importance warrants. I can, therefore, merely outline briefly the more basic difficulties that his answer presents.

1. He has altered his original thesis to read: Where the least cost point falls at capacity output, "marginal cost curves will no longer intersect marginal revenue curves (1) when average revenue curves are horizontal or (2) when average revenue curves are high and almost horizontal" (p. 900)—that is, under pure competition or almost pure competition.[2] This elimination of anything remotely resembling monopoly seriously limits the applicability of his theory, even if it were otherwise correct. In fact, he later (p. 903) tacitly assumes monopolistic competition (or something resembling it), in contradiction of his own original thesis.

[1] Wilford J. Eiteman, "The Least Cost Point, Capacity, and Marginal Analysis: A Rejoinder," *Am. Econ. Rev.*, Vol. XXXVIII, No. 5 (Dec., 1948), pp. 899-904.

[2] Even so, the statement is not necessarily true, since, to cite only one instance, costs may also be "high."

2. It is not "difficult to deal with a timeless-rate of production" (p. 902); it is impossible. "Rate" means "ratio"—the relation between two quantities, which in this connection are units of output and units of time. To speak in terms of "hourly output" obviously does not eliminate the time concept.

3. Professor Eiteman believes that by using the time unit of an hour he has eliminated the variations occuring in working periods when the day, week, or month is used. This is contrary to fact. He admits that the warming-up hour (is it an hour?) is different, but ignores the other variations which almost any study of hourly output will show—a rise in output during this warming up, followed by a continuous drop to the end of the day (with a reversal of trend for a short time after the lunch period, if any).

4. His final definition for capacity is "the maximum hourly output possible under normal circumstances" (p. 902).[3] In spite of this concept of capacity as output under *normal* circumstances, his next sentence states flatly that: "So defined, beyond-capacity output becomes impossible" (p. 902). That is, there is no such thing as abnormal conditions. His whole thesis, he admits, hinges on this untenable assumption.

5. By the use of an hourly output concept Professor Eiteman has vitiated his original argument in two ways: (a) He has invalidated his objections against ordinary marginal analysis, since he is not talking about what is generally considered capacity; he is criticizing the use by marginal economists of a concept which these economists did not have in mind,[4] (b) More important, he has passed out of the world of reality into the realm of fancy, for surely no businessman sits down to decide whether he will produce 700 or 800 cans of soup between nine and ten o'clock this morning (by marginal analysis or any other), but rather that he will produce so many cans this week (or month, or quarter).[5] If the curves refer to hourly output, we certainly agree that "businessmen do not construct marginal revenue and marginal cost curves nor do they operate at a scale of operation that such curves would indicate if they were drawn" (p. 903). The situation is different if the time unit is a week or more.[6]

6. In the course of his examples Professor Eiteman uses the illustration of a least-cost point at "85 per cent of capacity" (p. 903). If he considers this usual, it is an insignificant quibble to complain of Bowman and Bach putting this point at 73 per cent. His whole argument then disappears.

7. In his further example explaining what he considers to be the actual decisions of businessmen, Professor Eiteman's only reference to price is to

[3] This definition differs from the one I suggested only by the designation of the period as "hourly." I did not specify any particular time interval. I had in mind a period of a week, but the argument would apply equally to a month or any other reasonable period. With modifications it would apply also to the hourly concept.

[4] To use Professor Eiteman's original example, the graph which he cites from Bowman and Bach refers to output per *month* (*Economic Analysis and Public Policy* [New York, Prentice-Hall, 1943], p. 123).

[5] Professor Eiteman himself is forced to accept this longer time interval when he comes to his illustration (p. 903).

[6] The longer the time interval, the more likely the businessman is to use some sort of marginal analysis in determining his production.

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accept without question "the price printed in catalogs" (p. 903). How was this price determined?[7] More particularly, if, under his example, the small quantity currently demanded at this price forces a drop in production and a consequent rise in average (labor) cost from 70 cents per unit (which would be possible if 48,000 units per week were sold) to 84 cents per unit,[8] would not the producer at least consider the possibility of whether a price reduction would be preferable to a drop in quantity produced?[9] This inability to explain price determinations is the central weakness of Professor Eiteman's inventory analysis, which necessarily must assume that price is given to start with, and (apparently) cannot be altered by the producer.

WALTER W. HAINES*

[7] We might assume (*cf.* point [1] above) that it was set by pure competition in the market, but this is obviously not so, for the producer in the example can sell only 28,000 units per week at this price, not any amount. This then must be a situation of monopolistic competition or some other example of administered prices.

[8] If by "average cost" Professor Eiteman means labor cost per unit of product, he has lost two zeros somewhere: the average cost should be 0.7 cents and 0.84 cents respectively. This mathematical error, however, does not effect the argument in any way, and I have used his figures.

[9] It may be well that the price cannot be changed over short periods of time, as, for instance, between catalog printings, and in this case the producer may merely adjust his production to the quantity demanded at this price for the time being. But if conditions change significantly, he will certainly consider changing the price in the next catalog, and the new price will be determined, at least roughly, by the marginal analysis.

* The author is associate professor of economics in University College, New York University.

Economic Studies by the Joint Committee on the Economic Report*

The Joint Committee on the Economic Report, under a supplemental appropriation authorized by Senate Concurrent Resolution 26, is currently conducting studies in the fields of investment; monetary, credit, and fiscal policies; low-income families; and unemployment. All four studies were begun early in the summer and the subcommittees making them contemplate issuing one or more reports before December 31, the date set by the Resolution for the completion of the work.

The study of investment is directed toward an examination of the causes and cures of the variability of private investment, with emphasis on the relationship of this variability to over-all economic stability. In general, the subcommittee will seek through hearings and staff studies to find the factors which influence and determine business decisions to invest or not to invest. They will also go into the forms of investment contracts, *i.e.*, the debt-equity problem, to the extent it affects the flow of savings into investment; and the functions of intermediary institutions, such as insurance companies, investment companies, trusts, etc., in making direct investments or generating added investment.

The monetary, credit, and fiscal policies study will attempt to provide the

* The staff director of the Joint Committee is T. J. Kreps, the associate director G. W. Ensley. The address of the Committee is Senate Office Building, Washington, D.C.

basis of a better understanding and clarification of policies which are the most conducive to the maintenance of high levels of employment and production and of relatively stable price levels. The subcommittee will review the objectives of past monetary, credit, and fiscal policies and will be particularly concerned with the attention given in formulating these policies to the behavior of individual prices, to interest costs of the federal debt, to the prices of government securities, to the state of employment, to the rate of investment, to the balancing of the federal budget, to speculation in commodity and security markets, and to the balance of international payments. The study will cover the present instruments of control over monetary and credit conditions which are possessed by the various government agencies, including the Federal Reserve, the Treasury, the Federal Deposit Insurance Corporation, and the other federal agencies that make and guarantee loans and insure deposit and savings accounts; how these powers have developed and how they have been used; how effective the control instruments are individually; how effective they are collectively when used in such a way as to supplement each other; what the limits on their effectiveness are and the desirability of their use; and how effective the voluntary private programs are for controlling the supply and cost of credit. The monetary, credit, and fiscal policies subcommittee has already had presented to it two statements prepared by a group of outstanding economists who met September 16-18 at Princeton University to consider the fiscal aspects of the problem.[1] Additional studies are being made and hearings have been held on the monetary and credit phases of the study.

The subcommittee study on unemployment will be concerned with the causes of general unemployment and the kinds of remedies that can be applied. An initial study has been issued by the subcommittee showing the current status of employment and unemployment. It is planned that this report will be followed by another interim document to be issued in conjunction with the low-income families study which will summarize the most important federal, state, and local programs dealing with these subjects. An important part of the final study will be to develop a better general understanding of the problem of unemployment, the significance of the figures measuring the problem, and a general testing of the validity of existing information.

The study of low-income families arises from the interest in the relationship of the status of these low-income families to general economic conditions and how improvements in their status may help the economic health of the nation. The study, working within the limits of existing data on income distribution, will attempt to answer three broad questions: (1) What are the circumstances under which lower income families live? (2) What is the effect of the low production and low purchasing power of these families on the economy as a whole? (3) What can be done to increase the production and earning capacity of these families, thus making for a more prosperous national economy?

[1] See page 1263 this *Review*.

BOOK REVIEWS

Economic Theory; General Economics

The Economics of John Maynard Keynes. By DUDLEY DILLARD. (New York: Prentice-Hall. 1948. Pp. xv, 364. $3.75.)

Dudley Dillard, in his recent volume on Keynes, has pointed out in the preface that the *General Theory of Employment, Interest and Money* is not very intelligible to the undergraduate and general reader. It can safely be said that the author has remedied this lack of communication by producing a competent and thorough text for elementary students. It is particularly suitable for students because it avoids the major pitfalls and false problems that have plagued so many of the post-1936 discussions about Keynes' theories, especially those debates of literary economics.

In the preface, Dillard also explains that he has set out for himself the task of presenting an exposition of the "economics of Keynes rather than Keynesian economics." This narrow objective has, unfortunately, led him into some vulgarisms that could have been avoided by more sophisticated criticism and extension of the ideas of the master.

The reviewer has read Dillard's other works in Keynesian economics with great reward. The pieces on the relationships among Proudhon, Gesell, and Keynes were, in many ways, edifying. The author had already established himself as a leading student of Keynesian economics when he turned to the volume under review. It is only to be regretted that he did not continue more of the original scientific research that characterized his earlier works.

The author summarizes the *General Theory* and then discusses the basic concepts and properties of the system in greater detail. He defines terms; discusses consumption (multiplier), investment (the marginal efficiency of capital), interest and money (liquidity preference), interspersed with a little fiscal policy doctrine; analyzes the rôles of money wages and prices in the system; treats the problem of inflation; and finishes the discussion of the *General Theory* with a section on business cycles and international economics. Actually, the inflation and international problems fall outside the most narrow scope of the *General Theory,* as such. Other writings of Keynes are brought to bear on these two subjects. There is a final chapter on "The Development of Keynes' Thought and the Social Philosophy toward Which It Leads." Much of the material of this concluding chapter comes from his already published article on "The Pragmatic Bases of Keynes' Political Economy" (*Journal of Economic History,* November, 1946). There is also an extensive bibliography of Keynes' writings at the close of the volume.

Since Dillard has elected to follow the *General Theory* in a very orthodox

fashion, he includes many of those digressions that were not always essential to Keynes' main point. He has a splendid discussion of the concept of *user cost* (p. 68). The close adherence to the *General Theory* has led Dillard to overemphasize the importance of the theories of money and interest in relation to the problem of the determination of the level of employment. He makes much of the fact that Keynes really married the *monetary* and *real* aspects of economic life. While the reviewer is mainly impressed by Keynes' general theory of employment, Dillard is plainly more impressed by Keynes' general theory of employment, *interest and money* (italics are Dillard's). The reviewer definitely believes that one can go much more directly to the heart of problems with an analysis based on something like Frisch's time-honored distinction between the real economy and the money economy. In this analysis, the real economy clearly comes first, with the monetary aspects as refinements.

When Dillard comes to problems of international economics, he sets out from the well-known analyses of export and import multipliers. Within this framework, it is always good (employment-creating) to export and always bad (unemployment-creating) to import. How general can such a conclusion be? For economies which are largely self-sufficient or for which foreign trade is not very important, this may be a fruitful approach, but for those economies which must import raw materials and other producer goods, it is absolutely misleading. The latter have learned, well enough, that it is good (employment-creating) to import. In an international free-market system, all effects can be accounted for by introducing the terms of trade in a proper way. Import and export functions should be written with both relative prices and incomes as variables. Although it is fashionable Keynesian theory to let relative prices "wash out" of the equation system, the truly sophisticated Keynesian will recognize that foreign and domestic relative prices actually do not "wash out" and play a nontrivial rôle in a complete analysis of international propagation of economic fluctuations. One ought to be even more fundamental in the theoretical construction and work with a model that will survive price, exchange, import, and export controls. This can be done by introducing imports of raw materials and producer goods as factors of production in the technological relationships of the system. Then some quite different import multipliers will be obtained for a sizeable portion of the world.

The chapter on "War and Postwar Inflation" deviates from the teachings of the *General Theory* only by shifting over to *How to Pay for War*. In many ways, the inflation discussion is the least satisfactory of the whole book. It takes the line of delicate fiscal adjustments to wipe out the inflationary gap, with direct controls like price stops and rationing merely superimposed upon the more basic fiscal structure. This is, of course, in the Keynesian tradition of *How to Pay for the War*, but the reviewer would be inclined to reverse the order of importance of anti-inflation instruments. Price stops, priorities, rationing, and other direct controls really get the job done with a great deal of speed and flexibility, aided and abetted by fiscal policy. Dillard's interpretation of the facts of the recent U.S. inflationary experience is at variance with that of the reviewer on this point. The chapter in question is based too

heavily on U.S. experience, and his analysis might not stand up too well against the facts on Western European postwar inflation.

In the space of a short review one cannot go into all matters of criticism in great detail, but there are some specific points in the text which should be singled out for prospective readers. In transforming from income to employment (p. 35), the problem of prices should not be neglected. Production functions are defined in physical units; this point can best be made clear by working with a complete, well-defined mathematical model.

The discussion of the relationship between classical theory and liquidity preference (p. 173) is confused. It is quite incorrect to claim that liquidity preference has no place in a static classical model. Such a position does not show a clear realization of the mathematics involved in transforming from static systems to dynamic systems. There is no reason why the classical theory of utility maximization, in a dynamic setting, cannot be used to derive the equations of liquidity preference. In fact, they have. The static (equilibrium) solution of this dynamized classical model will then contain a liquidity-preference equation.

Dillard attempts (p. 197) to link the discrepancy between the interest rate and marginal efficiency of capital in the Keynesian system to the discrepancy between the market and natural rates of interest in the neo-classical system. This result is very questionable. In the discussion between Pigou and Keynes on wage flexibility and employment (p. 220), Dillard has written off the argument as a flat victory for Keynes. Some admirers of classical thought have not yet conceded victory and are continuing the debate on the basis of Pigou's article in the *Economic Journal* (December 1943), although the Pigovian analysis is seriously lacking in empirical content. The scraps of evidence that are available point in the direction of victory for Keynes. There is a rather peculiar and unsatisfactory definition of "true inflation" (p. 237) in the volume. It states that "true inflation occurs when prices rise without being accompanied by a rise in employment and output." One wonders what was "untrue" about the U. S. inflation of 1947-1948?

The characterizations of overinvestment theories of the business cycle (p. 278) do not seem to square with the customarily accepted position of this school of thought. "Overinvestment" is not to be interpreted literally or absolutely, as Dillard does, but is to be regarded in relation to an unbalanced structure of production and the availability of funds to maintain high investment with the "elongated" structure of production. On the positive side of the ledger, it should be pointed out that there is, among many good points, an interesting discussion of the labor theory of value (p. 194).

In view of the shockingly disrespectful and inaccurate references to the late Professor Rogin appearing in another review of this book, it must be stressed that it is good fortune to have some lasting evidence of Rogin's views on Keynes transmitted via Dillard. Rogin had no mean influence on Dillard's intellectual development.

LAWRENCE R. KLEIN

National Bureau of Economic Research

The Theory of Economic Change. By B. S. Keirstead. (Toronto: Macmillan. 1948. Pp. xi, 386. $5.00.)

This is a group of studies of the operation of the economy in the very long period when wants, resources, and technology—the customary constants—become variables. Professor Keirstead examines the effect of this variation upon aggregate demand and upon real income, its composition and distribution. The analysis for the most part is conceptual, as it must be within the compass of anything shorter than an encyclopedia, but it is illustrated along the way with material drawn from the Canadian and United States economies. An analysis of this kind, so intricate and far reaching, is a formidable undertaking and one from which less hardy men would withdraw. But it is necessary if we are to take the measure of the most important problems of economic policy.

The book opens with an excursion into methodology in order to discover how much of economic change is within the power of human purpose and how much arises from necessity. The author concludes that physical and institutional forces place a limit on freedom but these limits allow a wide area for voluntary action. It is the purpose of politics, he states, to define the proper ends of economic action while the economist's function is to propose the proper means for achieving them. Part Two examines the ideas of economic change held by Smith, Ricardo, Marx, and Schumpeter. The author finds none wholly satisfactory, and submits that economic change comes of a plurality of causes which express themselves through social institutions of voluntary design which in turn react upon the original causes. The effect of innovations and of changes in population then are studied by the familiar technique of model construction. Considerable attention is paid to partial equilibrium as well as to aggregative changes.

The operation of the firm through long periods, as demand and cost functions change, is next considered. In Parts Three and Four, there are useful summaries of some of the less emphasized aspects of partial equilibrium analysis, notably the quantitative expression of demand and the theory of the expansion path. Changes in the location of industry, with application to the maritime provinces of Canada, are studied in Part Five. The book ends with proposals for a policy governing population movements, international investment, the cycle, imperfect competition, and the distribution of income .

It must be apparent from this summary that although Professor Keirstead has ranged widely over the field of economics, his selection of subject matter clearly falls within the purpose of his book. He has presented all of this in an informal, usually lucid, style, which for the most part is pleasantly free of argot. In the review of price theory, there are, I believe, a few slips here and there, but they are unimportant to the theme of the book.

This theme is the assertion that unregulated changes in a market economy inevitably will produce stagnation from which relief will be sought either through democratic control or by the imposition of fascism or communism. The assertion has warrant in the author's belief that most industry operates under decreasing costs in the very long period, that the heavy fixed investment which this entails leads naturally to collusion as an escape from intolerable

instability, that as a result, income is distributed more and more unequally, that the enormous surpluses of monopolistic firms can find no investment outlets, finally that welfare must decline in consequence and political change necessarily follow. This is a variation on an idea now quite familiar, and, as might be expected, the names of Keynes and Hansen rumble through the book. Yet Professor Keirstead has gone somewhat beyond the familiar doctrine of economic maturity. He has examined the effect of imperfect competition in this process, he sets forth with more rigour the implications of population changes, and he has made still more emendations to *The General Theory*.

Those who are predisposed to the idea of economic maturity will find much here to sustain them. But those who are not will regret that Professor Keirstead has not lavished the same ability on demonstrating his assumptions as on reasoning from them. For it is not at all apparent to me that the optimum scale of plant requires only a few firms in an industry; indeed, my doubts were reinforced by some of the author's own footnotes. Nor is it self-evident that monopolistic firms and cartels enjoy great surpluses because the evidence, in both a theoretic and factual view, suggests the opposite. Neither am I convinced that monopolies have as much power as is suggested to subvert the freedom of the individual worker and consumer. Only if all enterprises were conducted by a single, vast monopoly (with devilish efficiency) would these fears come to reality. Finally, I cannot share Professor Keirstead's confidence in the capacity of government to do all that which he believes the market cannot do. One may agree that a *simpliste* attitude of *laisser faire* is silly to the point of being irresponsible, yet hold the most compelling doubts that the government should direct the development of resources, provide "social amenities," establish public enterprises, as well as look after the cycle through fiscal measures and continue most of its present functions. But though one may disagree with the author's answers to these primary questions of policy, he is to be commended for his forthright approach to them. It is a point of excellence in a valuable book.

WILLIAM D. GRAMPP

The University of Illinois in Chicago

La Valeur Logique des Théories Économiques. By BERTRAND NOGARO. (Paris: Presses Univ. de France. 1947. Pp. viii, 185. 200 fr.)

La Valeur. By FRANCOIS PERROUX. (Paris: Presses Univ. de France. 1943. Pp. 400. 100 fr.)

At any time, and particularly today, the progress of economic theory is aided by books like these. Professor Nogaro analyzes the errors in logic or pitfalls in thinking which have been typical of economic theories. Professor Perroux has written a rather detailed summary of the concepts of value, indicating what he believes are the deficiencies in the views of various economists and which concept may be regarded as most valid.

Neither book makes an original contribution to economic theory, but as insightful summaries, one concerned with logic applied to economic concepts and the other, with an economic concept submitted to sharp and minute criticism, they are stimulating and suggestive and compel a good deal of re-think-

ing of familiar notions. They provide a healthy shock for economists on either side of a Ph.D. who have grown sleepy in the presence of ideas they have "heard" before. Yet in spite of success in this regard, both Professor Nogaro and Professor Perroux have failed to give as deep or clear an analysis of the problems they study as might have been given or could be made.

Professor Nogaro is primarily concerned with the use of deductive and inductive methods in economic reasoning. Through a series of brilliant critiques of economic theories, he lays bare errors which have been committed, particularly in deduction. He summarizes these typical errors in the final chapter, called Conclusions. Much of this material should have been presented in the Introduction. The readers, who will be economists and not logicians, would then have been forewarned and the body of the book, consisting of analysis of these logical failings, would have been more effective. As it is, the errors in economic thinking are clearly revealed but the nature of the failure in logic is not always as obvious.

The topics of some of the chapters will indicate the range of theories analyzed: The Quantity Theory as a Deductive Theory; The English Classical Theory of the Equilibrium of International Trade; The Theory of Bimetallism; The Marginal Theory of Value; The Concept of Capital and the Classical Theory of Distribution; The Ricardian Theory of Rent; and The Equality of Savings and Investment According to Lord Keynes.

The most frequent logical errors which economists commit, it turns out, are not peculiar to them. For one, we have a tendency—Professor Nogaro asserts it is in our subconscious—to make incorrect conversions. For example: if an increase in the quantity of money results in a decrease in its value, then a change in the value of money can result *only* from a change in its quantity. But, apparently, the majority of errors do not result from violations of the formal rules of logic. The primary source is a lack of precise definition of terms or facts ("la matière du jugement," to use his phrase). This type of error applies particularly to the most general economic concepts—price, capital, income, etc. And it occurs most often in the deductive method. The inexactness usually leads to the choice of data or illustration to "prove" an *a priori* notion.

Professor Nogaro is especially concerned (even vexed) about the errors economists commit when they deduce. He recognizes that the deductive process has its proper use, even in inductive theory, but he attacks its careless employment. He demonstrates how errors can be compounded by appealing to an accepted economic concept (itself not clearly defined) or by recourse to general principles of logic, mathematics, or economic psychology, the effect of which is to impose false corroboration or deceptive rigor.

With regard to the inductive method, Professor Nogaro indicates the familiar source of error in observation and the difficulties of gathering statistics or historical documentation. He places his confidence in the inductive procedures because he believes the inductive economists are less exposed than the deductive to "certain errors and illusions." Perhaps! It depends on how easily one falls in love with an hypothesis.

In fact, the major logical defect in Professor Nogaro's approach is his naive and vague distinction between induction and deduction. His analysis would

have been more helpful if he had kept in mind the statement of Morris R. Cohen, "That all inference is deductive and that what passes as induction is either disguised deduction or more or less methodical guesswork."[1] A recognition of this fact would have shifted the emphasis from the fallacies of deduction to the problems and difficulties of induction. Professor Nogaro has written a book on the method of political economy. It is surprising he did not see where is the greatest need.

What Professor Nogaro is saying, in essence, is that economists should be better thinkers before they attempt to think. No debate! A considerable amount of confusion could be avoided and much effort be saved if the canons of logic and the cautions of semantics were mastered and practiced. But such caveats are not enough—they do not go to the heart of the problem. We need to understand more about the genetic process of a concept—the individual psychology, the sociology and, indeed, the political science. We must know more about the choice and verification of abstractions, the problems of bridging the abstraction-reality gap, and how to meet the challenges presented by imprecise, multiple factors. In brief, while something is to be gained from a review of deficiencies of economists as thinkers, it is more important to focus on problems he faces when he is thinking at a maximum. It is not merely a question of "tightening up" the discipline. There must be a basic orientation in analysis.

Economists are usually light-hearted and irreverent about scope and method. One should be suspicious of a purely methodological approach. But economists will more likely make progress from a common basis of good thinking than through the honored tradition—the minute reconciliation of the unclear through the magic of poor reasoning. Professor Nogaro's critique is a welcome stimulant to careful analysis. The exposition is concise, the prose direct and clear. It would be an excellent text or supplementary reading for a graduate course in theory.

Professor Perroux's volume is a keen, neatly organized account of the concepts of value. His analysis is considerably fuller and longer than one could find in an encyclopedia article or a history of economic thought. There are distinct advantages in this type of treatment of major economic concepts, especially when the critical survey is based upon an orienting principle and the conclusions are clearly accumulated.

The unifying concept in Professor Perroux's analysis of value is marginalism. "It is not," he says, "a body of propositions that one can accept or reject. It is the only group of coherent and integrated explanations of economic life" (p. 294). Professor Perroux does not explicitly state his own position but it is fairly evident that he regards himself as a neomarginalist. Neonmarginalism, according to Professor Perroux, recognizes that choices are determined by all the social forces operating on individuals. The marginal utility of each good is defined in relation to all the possible combinations of that good with others and all the desires for that good (p. 219). And the time-factor is introduced in the explanation and transformation of values.

[1] Morris R. Cohen, *A Preface to Logic* (New York, 1944), p. 19.

Professor Perroux divides his survey into three parts. The first and shortest section, The Objective Theory of Value as Cost, discusses the cost concept from both the classical and from the Marxist viewpoint and briefly summarizes the familiar criticisms of them. The second and longest part, devoted to the Subjective Theory of Marginal Utility, is a thorough analysis of the diverse formulations of subjective theory of value (Böhm-Bawerk, Menger, von Wieser, J. B. Clark, H. Mayer, etc.). He describes the emergence of the concept of marginal utility, its use in the explanation of economic calculations and attempts to show how through neomarginalism the idea of marginal utility is brought into a closer accord with reality.

The third and last section analyzes what Professor Perroux calls The Objective Theories of Social Value. The terminology is confusing. When value is considered as social, it resides in society and not in individuals and is, according to Professor Perroux, objective. He includes in this group: (1) The state theory of value (the individual exists only in the state, hence the goals and preferences of the state become those of the individual); (2) "Value is a representation of a collective being, society or the group which exists outside and above its members" (p. 306). (Would not Marx's labor theory of value properly come here?): (3) Institutionalism; (4) Welfare economics. On this ancient, yet most contemporary, problem of the state and the individual, Professor Perroux's criticism offers very little help.

Indeed, the fundamental weakness in Professor Perroux's analysis of value can be found in the unclear and undefined relations between the individual and society. Professor Perroux, of course, cannot be expected to clear up confusions which have been harassing during the entire history of human thought. Yet his own position of neomarginalism, in turn affecting his appraisal of the concept of value, is filled with implications which, left unexplored, minimize the value of marginalism in any form. How much is gained by saying that our marginal decisions are determined by a complex of social forces if we cannot establish the causal and quantitative relations of those influences on our decisions? Or if, as Professor Perroux does, one depreciates the rôle of the state, society, institutions or welfare economics. Marginalism can explain the mechanics but not the formation of our economic decisions. It is, however, knowledge of the formation of our choices, in substance and process, which gives body to economics and relates economic decisions to other human values.

In his defense of neomarginalism (and the implied sovereignty of the individual), Professor Perroux has tended to play down or under-rate the sociological and political aspects in the determination of value. But these critical comments may leave a wrong impression about his book. Professor Perroux has written an excellent summary of value, a sharp, illuminating, and rewarding effort. However complex and obscure are the social forces affecting our choices, in my neomarginal judgment both Professors Nogaro and Perroux have rendered economic thinking a very valuable service.

MENO LOVENSTEIN

Ohio State University

Price Economics. By ROBERT B. PETTENGILL. (New York: Ronald Press. 1948. Pp. xiii, 483. $4.50.)

Dr. Pettengill's work is intended primarily as a textbook for the second or intermediate course in economic theory. The book is concerned exclusively with the problem of how individual prices are formed in the product and factor markets. Accordingly, the work is divided into two sections of approximately equal length on the prices of commodities and the prices of services. This conventional organization, however, does not reflect a conventional exposition of price theory, for the author's work analytically is not wholly in the vein of the texts of Bain, Boulding, Due, Stigler and Weintraub.

The author believes that the principal contribution of his textbook to the presentation of price theory is his merger of institutional and theoretical approaches. By this statement Dr. Pettengill does not associate himself with the school of American institutionalists. Prices to him are still the center of the economist's interest; he has written a whole book to explain them. Nor does he reject the standard demand, supply, and cost curve tools of economic analysis, for he employs them constantly.

The term institutional as used by the author appears simply to express his desire for greater realism. His objection to considerable portions of modern price theory is that the models it employs are unrealistic. This objection, curious to note, is raised against the firm unit and not against the consumer unit. The model of a consumer unit as a satisfaction maximizing entity is accepted and is well presented in a chapter on indifference curve analysis. The exposition of demand theory is conventional in almost all respects.

But on the supply side the author finds much to criticize and reconstruct. An absolute model of the firm as a profit maximizing unit is held to be unrealistic. Supply prices are not determined solely by cost calculations, but by custom, law, inertia, etc. The cataloguing and description of such elements apparently makes the author feel that greater realism is achieved.

Besides the emphasis on realism, Dr. Pettengill also proposes a new classification of market situations upon the basis of the conduct of firms as well as their number. It is true, of course, that the number of firms often has a definite bearing on their conduct, but it is well to distinguish, the author insists, functional matters of market conduct from the substantive matters of market structure. It is important not only whether an aluminum producer happens to be the only producer of aluminum, but whether he will immediately cut his price if a fall occurs in the price of substitute metals. Instead of discussing duopoly, oligopoly, etc., as market classifications, Dr. Pettengill attempts to account for different types of buyer and seller behavior and to trace the major patterns of price behavior that result.

The discussion of wage rates, rents, interest rates, and profits in the second portion of the book upon the whole follows conventional lines, except for some of the author's views on interest and profits. Some instructors may possibly be bothered not so much by the book's unconventionality at points as by the fact that despite its size and systematization, it is at all times a work solely on

how specific prices are determined. The relationship between prices and the general level of employment is entirely neglected. The interest at all times is in individual prices, never in the pricing system as a unity. Despite an introductory chapter on the nature of economics, no real justification is made as to why the economist should be so concerned about explaining prices; no detailed discussion of the functions performed by the pricing system appears.

All this is probably a product of the author's basic distrust of the practical content of modern price theory. The significance of monopoly to the economy is dismissed in just two pages (189-191). The fact that monopoly distorts the allocation of resources receives no attention. To the student the only objection to monopoly to be derived from the text is that it affects the distribution of income. Nowhere does the text show that any policy conclusions may be drawn from the framework of price theory: the explanation of individual prices appears to be the only purpose of the book.

The author has apparently devoted much effort to precision and clarity in attempting to make this a successful textbook for students. While the style of the book is not lively, it is concise. Each chapter begins with a statement of the specific questions that the chapter is designed to answer and closes with a good summary. It may well be that this book will have a definite impact on the form of future textbooks.

A. Morgner

Texas A. & M. College

Enterprise in a Free Society. By Clare E. Griffin. (Chicago: Richard D. Irwin. 1949. Pp. xiv, 583. $5.00.)

This book is a timely and useful addition to the literature of American capitalism. Within its 573 closely printed pages of text, containing more than 250,000 words, Professor Griffin has given a systematic and scholarly treatment of enterprise in American society—its functions, motivations, consequences, and environmental conditions that facilitate it.

The star in Professor Griffin's cast is the entrepreneur. The author assigns him the leading rôle because he holds that the supply of enterprise is peculiarly important to the progress of an economy organized on a basis of private enterprises, competition, and free markets. Some members of the audience will, no doubt, object to the playwright's preoccupation with one character in the drama. This critic shares his view that the entrepreneur has too long been taken for granted and been cast in minor rôles, while other actors have monopolized the stage. It is high time that the enterpriser's talents be displayed, understood, and cultivated, if the play is to continue to command public support at the box office.

The book is divided into three Parts, the first of which treats the rôle of business enterprise in economic expansion. Part II deals with the environment of social groups and attitudes, public laws and regulations, that influence enterprise. Part III states the philosophy of liberalism, into which the propositions of earlier chapters are synthesized.

The author emphasizes the need for continuous secular expansion of the

American economy. Advancing science and technology force expansion, as do the imperatives of national security in an ideologically divided world. This expansion is required to provide psychologically satisfying opportunities for people, to create outlets for increasing savings, and to alleviate poverty. Economic expansion comes about mainly as a result of decisions by businessmen to initiate new firms or to re-equip or enlarge existing firms. Therefore, contemporary society needs most of all an adequate and increasing supply of enterprisers. To induce expansive decisions by them, motivations must be sufficiently strong. The author analyzes economic incentives, non-economic rewards of power, prestige, social approval, etc., and the general aura of public confidence and optimism which may be the most important motivating factor of all. The prospect of profits is a decisive incentive, and the author develops a theory which treats profits as a *combination* of (a) reward for assumption of risk, and (b) differential return for relatively great efficiency in management. The more rapid the progress of the economy, the larger must be factor (a), because progress means change, and change creates uncertainty and risk. A profit-and-loss economy is more endangered by lack of popular understanding of, and faith in, the social functions of profit than it is by want of investment opportunities or oversaving.

The business firm is itself a social entity, under strong impulsions to expand for its self-preservation, to meet current demand in its market, to hold its position in its industry, and to reduce the burden of overhead costs per unit. In an economy in which competition is necessarily imperfect, these motivations of the firm explain the business *policies* that are characteristic of American enterprises—increasing sales volume, encouragement of product and market research, low-margin high-volume pricing, direct reinvestment of part of earnings, rapid replacement of equipment, management instead of stockholder control of policies, executive incentive devices, and much rivalry *within* the large corporation as between its product divisions.

The incentives to initiate a new business are different from, and must be stronger than, those sufficient to induce expansion of existing firms. Prospective entrepreneurs are unaffected by such negative incentives as desire to minimize losses or to maintain a "share of the market," which affect established business even when they are unprofitable. A unique advantage of the competitive economic system—which provides a powerful stimulus to progress—is that it possesses a large number of decision-making centers. Hence the creative, innovating *minority* of firms exercises decisive influences over the passive majority, and forces the latter to adopt the newer, more efficient techniques in order to survive. The historical record of American production, and productivity, indicates that the various incentives to expansion that have operated in the past have been potent enough to produce a highly satisfactory performance.

In regard to the environment of enterprise, the author holds that entrepreneurship is relatively a scarce factor of production, and public policies must be re-examined from the point of view of their effects upon entrepreneural incentive. A new conception of "competition" is needed. The classical theory of "perfect" competition, in which price is the only variable,

is not a feasible norm for a progressive economy. Research and technical progress are conceivable only under "monopolistic" competition; they tend to broaden the range of alternative products open to buyers and sellers in the market, and to create and maintain an effective rivalry which is the essence of true competition. "Perfect" competition could exist only in a static economy. While there have been changes in the nature of competition, there is no evidence of a "decline" in competition in any significant sense. The state has erred, not so much by failing to break up concentrations of economic power, as by deliberately fostering monopoly through tariffs, "fair-trade" laws, agricultural programs, labor union legislation, etc.

The patent system comes in for an examination in connection with its effects on invention and innovation, and receives a clean bill of health. The federal tax structure is probed, and found wanting in its discrimination against income derived from corporate profits. Labor-management relations are scrutinized, and Professor Griffin finds collective bargaining on an industry-wide basis adverse to economic expansion. He commends, instead, company bargaining with independent company unions. There are chapters on the price level, and on foreign trade and economic expansion.

Professor Griffin's two final chapters concern the philosophy and the present crisis of liberalism. Here he gives a succinct statement of the classical liberalist position regarding the relation of the individual to society, and he points to the great achievement of the Western world under these concepts. He asks why, in the face of these achievements, the liberal philosophy and policy has undergone so rapid a decline during the present century. This brings him to the fundamental issue posed at the beginning of the book: How may the fact of growing economic interdependence, with the appurtenant search for personal "security," be reconciled with the aspiration for individual freedom? Professor Griffin answers that there is *no* ultimate reconciliation, but there is a satisfactory compromise. The contemporary liberal (in the old-fashioned sense) must advance a positive program, including vigilance to preserve personal rights, dispersion of economic power in the hands of all private groups, establishment of minimal "floors" of security, mitigation of extremes in wealth through taxation, and equalization of opportunity through the extension of education.

Viewing the book page by page, the critical reader will find that most of Professor Griffin's concepts and propositions are not unfamiliar. Different aspects of the relation between business enterprise and economic expansion have been treated by many writers. The profit theory stated long ago by F. H. Knight greatly exceeds in clarity and consistency that advanced by Professor Griffin. The treatment of public policies from the point of view of entrepreneurial incentives bears many similarities to the monographs and policy statements issued during recent years by the Committee for Economic Development. The liberal philosophy and program evidently owes much to the late Henry C. Simons, David McC. Wright, F. A. Hayek and others of their stamp.

Yet the book as a whole possesses a certain strength and freshness, which may be attributed to the consistency with which all subjects are oriented

to enterprise. It succeeds in drawing together between two covers a more complete—albeit imperfect—treatment of enterprise as a productive factor than has yet appeared. It thus achieves a useful purpose, different from those of conventional treatises on business economics, business policy, or public policy. Professor Griffin is not concerned with the formal economic theory of the firm, or with the technical details of business policy. His pages contain no algebra, geometry, charts, or graphs. They do reflect understanding of business and economic processes, intellectual balance, philosophical grounding, and historical perspective. If used together with one of the analytical works, the book should provide good textual material for intermediate courses offered by departments of economics or university schools of business.

A number of the more important errors and omissions may be noted:

1. Business cycles are so well recognized and important a phenomenon in the American economy that a book devoted to enterprise could reasonably be expected to examine the impacts of economic fluctuations upon entrepreneurial behavior, as well as the repercussions of business decisions upon the general economic situation. Even assuming strong secular growth, enterprise must still counter with short-term cyclical fluctuations. The book is silent on this subject.

2. Professor Griffin does not meet *directly* the Keynesian argument that the price system under modern conditions is ineffective in dealing with chronic under-employment of resources. Inferentially, he does deny the validity of this idea, but a sharper and more specific treatment of this subject is called for.

3. The book contains virtually no empirical evidence to buttress the author's generalizations about American business policy. Professor Griffin cannot be censured too heavily for this omission, because there is a lamentable want of verified and organized knowledge about the policies and actions of business executives under various conditions. The author might have been expected to make reference to such empirical studies as are available, and to point to the opportunities for empirical research that his study revealed.

4. The treatment of profit theory is confusing and ambiguous. "Profit" is used—often in the same paragraph—to embrace a variety of components, and it is difficult to know when the author uses the accounting concept of "net income available for stockholders," when he means the rate of interest, and when he refers to economic profit as a payment for aversion to bearing uncertainty.

5. The value of the book would have been enhanced by more complete references to other scholarly works. In many instances particular topics dealt with by Professor Griffin have been treated with greater clarity or fullness in earlier works by other writers. Thus, Beardsley Ruml developed admirably the relation of business enterprise to personal freedom, and the rôle of business as a social institution, in his *Tomorrow's Business* (1945); A. D. H. Kaplan contributed a valuable discussion of the economic rôle of new and small enterprises in his *The Special Problems of Small Business* (1948); Harold M. Groves made a penetrating analysis of the effects of federal taxes upon business decisions and alternative plans of federal tax reform in his

Taxation and Economic Progress (1946). The reviewer was unable to find references to these and other significant works, and was left to wonder whether the author had examined them, and if so, why he had ignored or rejected them.

NEIL H. JACOBY

University of California, Los Angeles

The Proper Study of Mankind: an Inquiry into the Science of Human Relations. By STUART CHASE. (New York: Harper. 1948. Pp. xx, 311. $3.00.)

"When it was suggested by Donald Young of the Social Science Research Council and Charles Dollard of the Carnegie Corporation that I run a kind of chain and compass line across the whole front of the sciences devoted to human relations, I was immediately interested. It connected with a deep and fundamental quest for certainty which had troubled me for years."

Such, writes Stuart Chase, was the cue for his new book. And the major question to be asked? "How far has the study (of men) progressed in two hundred years?"

"It called for an answer on a scale that the intelligent layman could grasp. The answer must get the subject into clear perspective and reasonable proportion, and it must not deal exclusively in high abstractions. It must offer concrete evidence to illustrate what has been done in the various fields of social science, and point out what gaps need to be filled."

Mr. Chase sets about his task with energetic vigor. And he has succeeded in writing an interesting and useful book. As will be remembered from such earlier works as *The Tragedy of Waste, Rich Land—Poor Land,* and *Idle Money—Idle Men,* Stuart Chase is a reformer who is basically optimistic about our capacity to solve our own problems, once we have defined them. He places his principal faith in "science" and the "scientific method" and gives no indication that he is troubled by the crumbling of spiritual foundations in modern life.

The Proper Study of Mankind is primarily concerned with providing an over-all impression of the current status and future prospects of the sciences concerned with *group behavior*—particularly cultural anthropology, social psychology and sociology. These new sciences are having a substantial vogue at the moment and, if I may indulge a critical streak, I would say that along with a number of others Stuart Chase is over-impressed with their scientific character and accomplishments compared to the disciplines of history, government, and economics. Not that I personally quarrel with many of his strictures against "Ricardian economics," but it seems hard to endorse the statement that "of all the social sciences, economics, along with political science, has the weakest theory structure." It is weak, no doubt, in its lack of verification, but is it weaker than the *theory* of group behavior?

I also wish it were possible to encourage careful observational and experimental studies designed to test hypotheses and to create an additive science

of man and still recognize that the most original and arresting hypotheses to test may come from people who take a more philosophical approach.

Consequently, I am troubled by the implications of the distinction that Mr. Chase feels "very important" between two wings of social science. "Far out on one side are the personal speculations of great men like Aristotle, Hobbs, Marx, and others not so great. Nobody knows whether what they say is true or not. Far out on the other side are the plodding note-takers in clinic, Congo village and laboratory, putting down what they see and hear. They are accumulating a solid core of truths. . . . Is Toynbee writing history or theology? Is the capitalist system mature? Listening to this constant buzz soaring up the ventilators of practically any department of social science, one suddenly realizes that the senators (debating the National Science Foundation Bill) had a reason for being confused. They had not analyzed the social disciplines to find the distinction between the scientific method and mere speculation. If they had done so, they might have been willing to subsidize projects like selecting pilots, but not *The Decline of the West* or *Das Kapital.*"

I regret that Mr. Chase finds it significant to labor this distinction. What seems crucial is that we should establish a continuum between theoretical speculation and "plodding note-taking," *both* being essential elements in any progress we may make toward understanding man.

But so much for criticism. What does Mr. Chase find in his survey of significant work now going on in the social sciences? This represents the main body of the book and is difficult to review because so much ground is covered. What he reports, after an extensive but inevitably spotty survey of research in progress, is that "the study of mankind" is showing healthy signs of new development and already has much to be proud of.

There is a chapter, for example, called "Revolt in the Desert," describing the work of a group of social scientists who "left their laboratories, clinics and field work to make a study in a community boiling with frustration and aggression"—the Japanese-American camp in Poston, Arizona.

In "Darkest Middletown" Chase reviews a series of sociological community studies from the Lynd's pioneering work to Lloyd Warner's *Yankee City*. Elton Mayo's Hawthorne experiments at Western Electric are given high praise, as also the work of Elmo Roper in polling public opinion. Honorable mention goes to Yale's Institute of Human Relations for its work on learning theory; to Arnold Gesell's Clinic of Child Development, also at Yale; and to the M.I.T. Research Center for Group Dynamics (now at Michigan) for its work on communications.

Economic research is given shorter shrift. But Colin Clark's "analysis of shifts in occupations," "the definitive work of Berle and Means on the modern corporation" and studies of the Gross National Product are specifically and favorably mentioned. As general advice to economists, Mr. Chase urges more testing of theories and the development of team work with other social science disciplines.

Curiously enough, considering the title of the book, there is very little reference made to the work being done by psychiatrists and others on the

study of personality. I would think myself that the analysis of the individual should go hand in hand with studies of group behavior in progressing toward a "science of man."

Perhaps Mr. Chase's most important contribution is to stand up publicly before a large lay audience and say, in effect: "Although the social sciences are still groping, they already have made important contributions to the solution of *practical problems*. And for those of you who are doubtful, here specifically are some of the things they have done. Do you not agree that this is an impressive beginning and that we should take heart from the progress being made in forging new social engineering tools?"

W. RUPERT MACLAURIN

Massachusetts Institute of Technology

Economic History; National Economies

British Economy of the Nineteenth Century. By W. W. ROSTOW. (Oxford: Clarendon Press. New York: Oxford Univ. Press. 1948. Pp. 240. 15*s*; $4.00.)

Professor Rostow has given us in this volume a stimulating and lucid group of essays which impinge on many aspects of theory and history. They are bound together by their concentration on Britain's economy from 1790 to 1914—a period which, the author suggests, lends itself to unified study—and by their concern with combining the disciplines of economic theory and history. The author expresses the hope that a study of the nineteenth century economy will be useful in that it appears possible that "the era of planning which confronts us will, in the end, attach a greater premium to the tools of classical economics, and their recent extensions, than the pathological inter-war years" (p. 2).

The first four chapters contain analyses of various movements in the British economy. This survey opens with a most interesting contribution to the study of long waves. Rostow's principal concern is with the various trend movements in real wages which may be detected during the course of the century. Emphasis is laid on the "shifting balance between productive and unproductive outlays; and among types of productive outlays with differing yields and differing periods of gestation" (p. 12). This is a most interesting concern with the dual effect of investment in creating income and in creating productive capacity; and the author pursues his theme with a deft manipulation of highly relevant statistics. Yet it cannot be said that he is wholly successful. We should need more detailed knowledge of the variations in the lengths of the gestation periods of different investment undertakings; and in view of the composition of the index of real wages used here, we may perhaps query the closeness of the connection envisaged between the cheapening of *industrial* products and the rise of real wages. In particular, we may ask whether a more important place ought not to be given to the terms of trade. But while we pose these questions, we should remember how brief is Rostow's treatment and how remarkably rich it already is.

Chapter II draws our attention to cyclical movements. Pointing to the

existence of minor cycles interspersed between the major, especially in the first half of the century, Rostow notes the predominance of consumption goods in British exports during this period and dilates on the possibility of an inventory cycle in foreign trade. Then, after a brief review of the data on the amplitude of the nineteenth century cycles, he gives a few skilful pages on four factors involved in them: the cyclical behaviour of British harvests, commodity prices, long-term investment, and the Bank of England. An adequate assessment of the significance of these forces would require their being set in the larger perspective of a more rounded examination of these cycles, and it is to be hoped that the author will one day do this for us. Within its present scope, however, his analysis might be improved by an examination of the interconnections of the forces with which he deals. Might not harvests, for instance, have something to do, through their effects on wage costs, with the behaviour of commodity prices?

After these general pictures of the century as a whole we have two essays on aspects of the "Great Depression" in the second half of the century. Professor Rostow contests the view that this was a depression period, and remarks on the high *average* level of employment. His explanation of the events of the period turns on the growing foreign competition which was besetting the British economy; and on the disposition of investors to seek domestic rather than foreign outlets for their funds—a reversal of their policy in the previous few decades. The second essay on the "Great Depression" treats of the movements of real wages between 1873 and 1886. Having a smaller field to cover than in the opening essay, the author is able to deploy his arguments in greater detail and we get some idea of the fullness of the analysis which would appear in an expanded version of Chapter I. A rise in real wages is related not only to the characteristics of investment in the same period, but also to long-term investment in a previous period; and "an element in the increase of real wages was the favourable trend of the terms of Britain's foreign trade" (p. 100). The chapter closes with a few pages on income distribution; and the appendix (pp. 226-35), criticizing Kalecki's theory of distribution, should be read in conjunction with them.

From cyclical analysis we turn to two chapters on the complex interrelations between economics and politics. Rostow's primary concern here is to show the close connection between legislation and current economic events, but we might suggest that the order in which the chapters appear to be reversed. The second gives a skilfully balanced disquisition on the interplay of economic, political and social forces, while the first is in the nature of a more detailed essay on what may be done with a part of the framework sketched in the second.

The volume closes with two contributions to the history of economic thought—the impact of the "Great Depression" on theory, and Bagehot's trade cycle analysis—; and, finally, a detailed and adroit survey of the years 1874-1879.

In sum, it is a rewarding book, richly deserving attention.

A. D. Knox

The London School of Economics

Japan's Economy in War and Reconstruction. By JEROME B. COHEN. (Minneapolis: University of Minnesota Press. 1949. Pp. xix, 545. $7.50.)

This comprehensive study of Japan's economy from the early 1930's through 1948 is an outstanding contribution. Until now, despite the magnitude of the American war effort against Japan and our maintenance since her surrender of an occupation accompanied by large expenditures for relief and economic rehabilitation, American economists have published remarkably little analysis of the country that was our Pacific enemy in World War II. The principal published materials available heretofore have been, first, the prewar study of Mrs. Elizabeth Schumpeter and her associates, and, second, the extensive postwar reports of the U.S. Strategic Bombing Survey, which remain the greatest single body of material on wartime Japan readily available to American scholars unfamiliar with Japanese sources. Professor Cohen, an economist who was a Navy Japanese-language officer during the war and a member of the Bombing Survey, has studied the material produced by the Survey and a vast array of other documents, both American and Japanese. This book is the highly successful result.

Commencing with a chapter on the decade-long preparations before 1941, Professor Cohen proceeds to portray in detail the anatomy and pathology of Japan's war economy and concludes with a chapter on the major economic features of the occupation. Many more words will surely be written about the occupation, but this study of the war period is not likely to be superseded very soon. His Chapter II, "War Years—Overview," is a valuable summary.

Japan's defeat is shown in this book to have resulted primarily from the paralysis of her economy through Allied blockade. With about six million gross tons of shipping (steel ships of over 500 tons) on December 7, 1941, plus over four million tons built or captured during the war, Japan had only about half a million tons in operation on August 15, 1945. Japan's island economy, dependent upon large imports of food, petroleum, and industrial raw materials, could not have functioned much beyond the actual date of surrender even if no American bombs had fallen on Japan. The effects of Allied attacks on Japanese shipping appear to have been seriously underestimated by both Japanese and American leaders. It was not until after the loss of Guadalcanal that a full-scale Japanese ship-building program was undertaken, although considerable effort went into the expansion of facilities for processing raw materials that the Japanese hoped to import from the conquered areas. On the American side, the damage done to Japan by blockade was so incompletely understood that planes were sent over Japan from great distances and at great expense to drop bombs on steel and aluminum plants and oil refineries already idle from lack of imported raw material. One is tempted to speculate about the probable course of the war—and even of the occupation—had the importance of blockade been fully appreciated from the start. Professor Cohen shows that factors other than ship losses had relatively little effect on the approach of economic collapse. He believes that Allied bombing played a large rôle in persuading Japanese

leaders to "recognize the facts," but he does not attempt a complete evaluation of all the non-economic factors that led to the political decision to admit the imminence of defeat and offer to surrender.

It was not until the end of 1942 that Japan's leaders realized her predicament, and only then were plans made for all-out economic mobilization. The peak in raw material imports came in 1943. The output of finished munitions and other end-products reached a maximum in 1944, when gross national product also reached its highest level. Professor Cohen finds that the strenuous efforts of 1943 and 1944 yielded creditable results, considering Japan's basic limitations. But there was no escape. Within the narrowing limits of her freedom of action, Japan faced the problems of priorities, allocations, prices, labor, finance, and the many other aspects of economic management in modern war. Professor Cohen discusses them at length and shows that the Japanese bungled the job in various respects.

No single, cohesive group controlled the Japanese government and bureaucracy or, consequently, economic mobilization. The Army, Navy, and big business struggled for power, and no group won a clear and decisive victory before they all went down in defeat. No basic raw material was completely subject to the ultimate allocating control of any single person or group. In most cases the Army took what it could, the Navy did likewise, and the civilian economy did without, to a point where productive efficiency was very low. When civilian authorities handled allocations, as in the case of certain non-ferrous metal supplies, "The Army and the Navy each made totally arbitrary demands and refused to furnish even the Government, to say nothing of the control association, with any details of the use to which allocations were put" (p. 64). By a short-sighted draft policy, by lack of adequate training programs in industry, and by other means, the Japanese produced an acute manpower problem; plants had many workers but little skill and little output.

This book contains certain errors and inconsistencies, mostly small and of minor significance. One weakness is that, despite a long and very useful index, it is at times hard to locate information in the book, which appears to be organized and written as much for consecutive reading as for reference purposes. Also the charts, placed together at the end and not very attractively reproduced, are much less useful than they could be. Such minor limitations do not seriously detract from this major work.

Warren S. Hunsberger

Chevy Chase, Md.

The Allied Occupation of Japan. By Edwin M. Martin. Published under the auspices of the American Institute of Pacific Relations. (Stanford: Stanford University Press. 1948. Pp. xiv, 155. $3.00.)

Occupation policy in the former enemy countries deserves careful study by economists. This relates not only to the economic outcome in Japan and Germany, which will obviously affect competition, stability, and economic development in many parts of the world. There is, in addition, a professional

opportunity here to observe in high relief the tendencies, provincialisms, and internal conflicts of our own economic thinking.

The present volume is one of a series on postwar Japan sponsored by the Institute of Pacific Relations.[1] Mr. Martin's book is concerned chiefly with policy, and is only secondarily concerned with the successes and failures of the Occupation to date. Roughly half the text deals with specifically economic issues, the remainder being concerned with matters of administration, demilitarization, democratization and social reform. Each section leads off with citation of the relevant passages from the basic Occupation documents, which are provided in full in handy appendices.

It is a conspicuous and rare excellence of this book that it maintains a comprehensive and balanced treatment of a highly controversial subject. Credit should go to Mr. Martin's own flexibility of mind, as well as to his intimate knowledge of the issues (he was formerly Chief of Occupied Area Economic Affairs in the Department of State). Especially notable is his judicious treatment of the complex reparations issue, underlining the dilemmas which have been inherent in this issue from the beginning, and recounting the protracted negotiations. This discussion helps to explain the recent U.S. declaration terminating Japanese reparations, a declaration which was treated by the press as simply astounding.

This book's coverage extends only to the end of 1947. This span permits Mr. Martin to present the various aspects, interests, and considerations, and to hold them in solution, as it were; whereas after mid-1948, the pressure of events precipitated the elements out of solution, deposited them in patterns of sharp contrasts, and forced the Occupation authorities to make selections and rejections which have evoked storms of protest.[2] It is testimony to Mr. Martin's insight that he discusses in one connection or another most of the issues which have since come to a head, including not only reparations payments *versus* termination, but also: the deconcentration program (especially in the version of attacking bigness as such), *versus* the encouragement of industrial operations; the encouragement and even license previously accorded to labor, *versus* efforts to restrict certain strikes, maintain wage-ceilings, and reduce overstaffing; demands for budget-balancing and corresponding "austerity," *versus* measures to stimulate the revival of production and *versus* desires to raise levels of living (especially as an encouragement to democratization); insistence upon tighter government controls (especially over allocations) and upon new forms of SCAP intervention, *versus* desire for rapid decontrol and the original policy of giving the Japanese government primary responsibility for the Japanese economy.

Most of the actions recently taken on these issues are designed to rehabili-

[1] Other volumes already published in this series are: Harold Wakefield, *New Paths for Japan*; T. A. Bisson, *Prospects for Democracy in Japan*; Jerome B. Cohen, *Japan's Economy in War and Reconstruction.*

[2] Mr. Bisson's book, mentioned above, is an outstanding example of such protest in the same IPR series. Among Asiatic spokesmen, the Chinese communists on the one hand, and General Carlos Romulo of the Philippines on the other hand, have been particularly vehement.

tate the Japanese economy; but they operate, to some extent at least, at the expense of social reform and associated objectives of SCAP and of American ideology in general. It is becoming increasingly clear that the Occupation of Japan faces not only the ordinary problems of rehabilitating a devastated country, torn between lagging production and tugging inflation; but also is struggling to do this job on American principles which are not always consistent with each other, let alone consistent with Oriental traditions. Furthermore, these principles, developed for our own advanced economic situation, tend to overlook the needs of an industrialization which has been suspended in mid-course, and which calls for further industrial expansion to relieve agrarian pressure, requires a certain concentration of income-flow or other devices of forced saving and capital formation, looks for enlargement of foreign trade, and still depends upon low production costs (including perhaps low labor costs relative to Western competitors).

The actual outcome of all these contradictory pressures is still in process, on both the ideological and the operational levels. This should provide a fascinating subject for a follow-up study of the Occupation in its later stages.

EDWIN P. REUBENS

Cornell University

La Planification en Tchécoslovaquie (Le Plan biennal). By GUY BRAIBANT. (Paris: Armand Colin. 1948. Pp. 160.)

This study appears as one of the Cahiers de la Fondation Nationale des Sciences Politiques, a semigovernmental institution aiding research in the social sciences. Written by a young French economist, it describes the genesis, contents, methods and results of Czechoslovakia's two-year plan, carried out between 1946 and 1948. Although the plan is now a matter of history, having been superseded by the far more ambitious and revolutionizing five-year plan, it deserves much more study than it has received up to now. There are plenty of all kinds of plans abroad, but none representing comprehensive and specific planning for a country already having achieved a high degree of technological development, industrialization, and dependence on foreign trade, such as Czechoslovakia. The study is well organized, adequately anchored in theoretical concepts and contains a fair amount of statistical material.

Its weakness lies in somewhat onesided reliance on official data, which leads the author to emphasize the successes of the plan without much reference to its failures, *e.g.*, in the building industry. The same source material is probably responsible for the statement that the Czech economy from 1918 to 1945 was in a colonial state of dependence on foreign capital, whereas in reality it was even exporting capital during at least part of that period. It would certainly be difficult to prove that the leading banking concern, that of Zivnostenska banka, which virtually controlled Czech industry, was a tool of foreign capital. Aside from a few mistakes of this kind, the study should prove useful to all students of modern planning.

FRANK MUNK

Reed College

Land in California. By W. W. Robinson. (Berkeley: University of California Press. 1948. Pp. xiii, 291. $4.00.)

Gold is the Cornerstone. By John W. Caughey. (Berkeley; University of California Press. 1948. Pp. xvi, 321. $4.00.)

The economic development of California, with many unique features distinguishing it from the general pattern of development of the national economy, has seldom been singled out for specific analysis. Economic history texts give only brief mention, and general histories of the state treat economic development in incidental fashion. Much of the best work in the past has been found in specialized studies such as the Stanford University Press series on transportation,[1] and descriptions of certain periods, of which R. L. Underhill's *From Cowhides to Golden Fleece*,[2] based upon the papers of Thomas O. Larkin, American Consul in Monterey, is one of the outstanding. Thus, of particular interest is a new series published by the University of California Press in commemoration of the state's centennial, entitled *Chronicles of California*, designed to present a survey of all phases of development of the state.

The two volumes thus far available in the series which relate to economic aspects deal, respectively, with problems of land ownership and the direct significance of the gold discoveries. The author of *Land in California*, W. W. Robinson, has long been affiliated with the title insurance business in the state. The volume presents a comprehensive survey of the questions of land titles and land ownership from the period of earliest Spanish settlement down to the present time. The origins of the Spanish and Mexican grants are explained in detail; at least a third of the book is concerned with the situation prior to the American conquest. In contrast, relatively little space is allocated to the problems of American treatment of the earlier grants, and inequities involved in this treatment are minimized, in contrast to the attitude of many other writers. The problem has always been controversial, primarily because the actual breakup of the ranchos, caused to a large extent by the methods of handling claims, facilitated development of the state, though it involved failure to keep in good faith the provisions of the Treaty of Guadeloupe Hidalgo. Latter sections of the book are concerned with problems of railroad land grants, the almost unknown effects of the federal land-script laws, the development of title insurance (an almost universal practice in the state), and related questions. In general, Robinson emphasizes the more technical aspects relating to land ownership and distribution of land, and devotes less attention to socio-economic effects of various policies and occurrences, although the latter are not completely neglected. The effects on the economy of the Spanish-Mexican land grants and their treatment under American rule, for example, are developed much more adequately in R. G. Cleland's excellent study, *Cattle on a Thousand Hills*.[3] In addition to the land grant question, other controversial issues—large-scale land ownership in the last seventy-five years, the

[1] Particularly, O. O. Winther, *Via Western Express and Stagecoach* (1945); Jerry MacMullen, *Paddle-Wheel Days in California* (1944); and Gilbert H. Kneiss, *Bonanza Railroads* (rev. ed., 1947).

[2] Stanford, Stanford University Press, 1939.

[3] San Marino, Huntington Library, 1941.

question of title insurance, and the tidelands problem—are treated far more briefly than is warranted by their importance. In general, however, the volume provides a good background for an understanding of land use problems in the state.

J. W. Caughey's *Gold Is the Cornerstone* is in a sense disappointing, because the treatment of the significance of the gold discoveries for the development of the state is far less detailed and complete than is suggested by the title. The book contains very little material not already easily available, but it does present a good and highly readable summary of the general picture of the gold discoveries and their immediate consequences for the state. Unfortunately, a third of the book is devoted to a description of the routes by which gold seekers reached the West Coast—a subject which is not very productive for an understanding of the development of the state. The effects of the mining developments upon population, industrial, and agricultural growth are noted, but only briefly, and in summary fashion. Likewise, technical aspects of mining and mine organization beyond the earliest period are scarcely touched upon, in contrast to the excellent analysis in Rodman W. Paul's *California Gold.*[4]

John F. Due

University of Illinois

[4] Cambridge, Harvard University Press, 1947.

Statistics and Econometrics

Historical Statistics of the United States, 1789-1945—A Supplement to the Statistical Abstract of the United States. Prepared by the Bureau of the Census with the cooperation of the Social Science Research Council. (Washington: Supt. Docs. 1949. Pp. viii, 363. $2.50.)

This new publication of the Bureau of the Census, hereinafter referred to for brevity as the Sourcebook, is submitted to members of the economics profession, especially economic historians, in partial fulfillment of a long-felt need for more readily accessible and more adequately described historical time-series. It will serve both as an aid to basic research and as a handy reference volume for analysts of current economic developments, teachers, students and others who frequently need historical statistics in their daily work. Everyone who has spent frustrating hours searching for an elusive figure, source, or adequate description of data will welcome the effort which has been expended to lighten this burden as well as that which, more importantly perhaps, is envisaged for the future.

Users of the present volume will note numerous shortcomings in coverage, description, and format. This has been anticipated by the editors, who state in the introduction that this edition is to be regarded as a working manuscript rather than a final product. "As such, it establishes a pattern and provides a preliminary selection of materials. Gaps and weaknesses are thereby disclosed and problems crystallized. On the basis of the experience thus gained, and the suggestions and criticisms of users of this edition, the process of revision will make possible a more useful future edition."

Coverage has been determined partly by the conception of purpose and partly by budgetary limitations. The basic premises for data selection as initially drafted (see Appendix II) contained a twofold statement of aim: (1) "To provide a convenient source of reference for technicians who need information outside their immediate field of specialization . . ."; (2) "To provide more intensive students with a summary guide to the more important time-series data available . . . and [with] the principal qualifications as to interrelationships of such series. Also, it should provide specific indications of the sources. . . ." To meet these criteria within the arbitrarily selected limit of 3000 series it was further held essential, so far as feasible, to confine the presentation of data to those for the continental United States as a whole; to present only annual or census-period data beginning no later than 1920 and covering at least 20 years; to include only series which are of major importance in each field, avoiding cross-classification and sub-classification; and to present absolute rather than derived or adjusted data. These standards were not intended to be, and have not been, rigidly adhered to. None the less, allowing for an appropriate amount of flexibility and for the compromise of initial ideals in the face of practical difficulties, they define the broad character of the volume and explain the omission of much detail.

Analysts of business fluctuations will find their need for monthly and quarterly statistics briefly recognized in Appendix I, which presents 30 such series selected by the National Bureau of Economic Research. The series were chosen, as no doubt they should have been, for their representativeness and are, for the most part, familiar and accessible. Their assemblage as a compact unit, together with careful descriptions and source references, is undoubtedly a service but this appendix must be regarded as a statistical aperitif, to whet the appetite, rather than a major contribution to the cause of business cycle analysis. Researchers in this field will, nevertheless, find the volume useful. Many of the 3000 annual series are available elsewhere in monthly or quarterly form, and the descriptive texts accompanying the annual data can be extremely useful as guides to sources and aids in interpretation. They would have been even more useful for this purpose if information concerning the existence and time-coverage of parallel monthly and quarterly data had been systematically provided.

Budgetary limitations confined selection of annual and census-period series primarily to data readily available in federal agencies and a few additional quarters. The Bureau of the Census was able to engage in little new research of its own, and the conditions of compilation made it impracticable to take full advantage of the research already performed by others. That this was so is unfortunate, but the decision to bring out the Sourcebook in immediately useful, though incomplete, form was undoubtedly wise. Some of the data included were already available in more detail in special-purpose publications, such as the *National Income Supplement* (Dept. of Commerce), *Agricultural Statistics* (Dept. of Agriculture), and *Banking and Monetary Statistics* (Federal Reserve). These have been extended or supplemented with data from less accessible sources.

The scope of the Sourcebook as it stands can best be pictured by comparing it with the Statistical Abstract, which it is designed to supplement. Whereas the 1948 edition of the Abstract contains 32 topical chapters, excluding appendices, the Sourcebook contains only 14. The subjects of four chapters in the Abstract have been omitted entirely—Crime, Climate, and Territorial Commerce presumably because of the low priority of their claims to space, and Social Security because of the recency of the data. Material in four other chapters has been covered only incidentally. References to scattered series appearing in the Abstract under Education, Communications, Military and Veteran Affairs, and Distribution will be found in the subject index of the Sourcebook but these topics have not been treated in any systematic way. Owing to greater consolidation, the subject coverage of the Sourcebook's 14 chapters is closely similar to that of the Abstract's other 24, but much of the latter's refinement of detail, especially regional and non-time-series data, has been sacrificed to gain historical depth.

The editors suggest that it would be desirable to include in a future edition additional selections of the less readily available series, more "lapsed" series, and series in additional but unnamed fields. Some of the omitted or sketchily treated topics mentioned above are promising candidates for future expansion of the subject coverage. Indeed, it is not immediately apparent why social security data were not included in the present edition by way of exception to the general time-coverage rule. The revised Department of Commerce series on National Income and Gross National Product have been included, for example, even though they run back only to 1929. Nor is it clear, in view of their relevance and ready availability, why the census figures on school attendance, some of which run back to 1870, and various series compiled by the Office of Education, were omitted. They would have fitted well into the chapter on Government.

On the credit side, one may record two instances of bringing inaccessible series within easy reach. One is in the chapter on Wealth and Income, which brings together from obscure sources several estimates of national wealth and its components, including the contemporary estimates of Blodgett for 1807 and earlier years. The descriptions of the data are adequate to warn the unwary interpreter and to guide the careful student along fruitful paths. The second noteworthy contribution is in the chapter on Balance of Payments and Foreign Trade. Here are reproduced in summary form the pioneering estimates of Bullock, Williams, and Tucker hitherto available only, to this reviewer's knowledge, in the scarce 1919 issues of the *Review of Economic Statistics.* Again the descriptions have been prepared with care. The assemblage of less well-known data from multifarious or scarce sources into compact tables has occurred in other cases too numerous to identify and is one of the Sourcebook's most useful contributions.

The descriptive notes comprise nearly a third of the volume's bulk (the plan called for a higher ratio of text) and are designed to be as important a contribution as the statistics. For the most part this aim has been achieved, in some cases with notable success. The quality is uneven, however. The Census

Bureau was unable, or did not attempt, to hold its cooperators—mostly other government agencies—to rigid standards. The result is a lack of consistency, precision, and clarity in the selection and treatment of information to aid users of the statistics. At a minimum, users should expect to find (1) a precise statement of source; (2) unambiguous definitions of terms; (3) an indication of reliability (which might be satisfied by a statement of the compiler's degree of confidence in the data but would ordinarily require elucidation of the basis on which estimates were prepared, of the nature of reporting systems for recorded data, and of homogeneity and other characteristics affecting interpretation); and (4) specific explanations of discontinuous changes in order of magnitude. Of these four requisites, only the first appears to have been fully satisfied.

To mention a few deficiencies, value figures for mineral production are frequently presented without indicating the degree to which the materials had been processed up to the point of valuation, which varies from case to case; also, it is not always clear whether production figures for smelters and refineries include or exclude imported materials. The utility of several series running back to the 18th and early 19th centuries has been diminished by limiting the description of the early data to a citation of source only. If it is worth devoting a thousand words to describing the vagaries of the statistics of gold production since 1792, one is certainly entitled to have his curiosity satisfied concerning the basis for early estimates of bituminous coal production, and of raw cotton production for the precensus period, 1792-1838; or to receive a hint concerning the manner in which figures for the assets and liabilities of Colonial and State banks, 1774-1833, were compiled. Nonspecialized users of medical school data will be grateful for textual comment concerning the dubious accuracy of pre-1900 figures and the reasons for certain sudden changes in magnitude. Users of other series may wish that this type of aid had been introduced more frequently.

The format of the Sourcebook undoubtedly received careful attention. But what was the reason for placing the entire descriptive text at the beginning of each chapter instead of having the general and specific notes precede the particular groups and tables to which they refer? The present arrangement is less convenient and conducive to careless disregard of essential commentary. The cross-reference system linking text and tables is, on the other hand, excellent.

A praiseworthy device of presentation is the Time-period Index, a convenient tabulation which permits one to locate quickly every series that stretches back to the 18th century, to the period 1800-1819, and so on to date. It was doubtless designed with the needs of economic historians in view. For the next edition, effort might be made to devise special purpose aids for other types of users. Series on prices, production, value, inventories, employment, wages, payrolls, productivity, etc. are scattered throughout the volume but the user of the subject index must refer to individual commodities or industries to determine what is available in each case. A ready reference guide to series of these common functional types would be especially helpful. Other special interests could be determined and catered to in a similar way.

In conclusion it is only fair to note that, although the Bureau of the Census carried the major financial and professional responsibility for producing the Sourcebook, it received assistance from a special committee of the Social Science Research Council and the Council's Committee on Research in Economic History. Initially, in 1945, the American Economic and Statistical Associations were jointly interested and established an investigatory committee at the instigation of Dr. Frederic Dewhurst, the originator of the idea. The interest of the two professional associations appears to have been transitory, possibly for lack of funds to carry the project through to a suitable conclusion. Whatever the reason, it may be hoped that the appearance of the Sourcebook will be made the occasion for a revival of the professional societies' interest. Many valuable brain-hours are wasted because of the horse-and-buggy techniques which still dominate the dissemination and processing of economic and other social statistics. Lack of resources will be a continuing problem unless businessmen and the Congress can be persuaded to transfer to the social sciences some of their high regard for research in the natural sciences. The professional societies, however, should not dodge their responsibility for improving both the standards of quality and the accessibility of statistics. A special committee or group, devoting itself intensively to this task, could scarcely fail to produce impressive results, especially in the field of nonstandardized monthly and quarterly series. Progress in measurement is not a sufficient condition for further rapid progress in the social sciences but it is a highly necessary and unnecessarily neglected one. The Sourcebook is a valuable step in the right direction. Its value will be still greater if those whom it is designed to serve are alive to the needs and potentialities which it suggests.

CHANDLER MORSE

Williams College

Economic Systems; Planning and Reform; Cooperation

Guideposts in Time of Change. By JOHN M. CLARK. (New York: Harper. 1949. Pp. x, 210. $3.00.)

Works of John Maurice Clark are "must" reading for those in search of guidance on basic social problems of our age. *Guideposts in Time of Change* is no exception. Here again we find the results of the rare combination of high technical competence, wide learning in many fields of social study, and wisdom which have placed Professor Clark in the first rank of social scientists. And, thanks to the author's pains with clear, nontechnical exposition, the book furnishes to policy makers, editors, and general readers a masterly treatment of fundamental problems that is both comprehensible and succinct.

The book consists of a series of lectures given at Amherst College on the Merrill Foundation in the winter of 1947-48. It is complementary to the author's Cook lectures at the University of Michigan published a year earlier under the title *Alternative to Serfdom*. It is not a rehash of the materials in the previous volume, although much of the discussion is in the same general area of problems of institutional change and balance between freedom and authority. Many subjects treated here were not discussed in the earlier

volume, and vice versa. The opening chapters on the totalitarian threat to free societies give to this volume a somewhat different orientation. The new book devotes more attention to the problem of economic instability, and also carries much farther the explorations into certain problems, such as the relation of wages to total employment and production. Even where there is some duplication with the earlier volume, this book contains new insights and reflections that will repay careful perusal.

The seven chapters of the book seem to fall into four parts, linked together but not closely articulated. The first two chapters diagnose the nature of the totalitarian threat and give a prescription for meeting it. Setting our own house in order is a first imperative. Accordingly, Chapter III is devoted to an examination and clarification of the objectives of a free society in the present age, with special reference to American values. Maintenance of adequate job opportunities being a critical problem, attention is given to the key factors—spending, prices, and wages—in three chapters that make up about half the book. Here the author formulates a theory of wages "which might afford a basis for an economically sound wage policy" for the guidance of union leaders, managements, mediators, and arbitrators. The last chapter, bearing the arresting title "Changing Balances: Uncommon Requirements for the Common Man," discusses the balance of motives and forces in collective bargaining and the chances of acceptance by business and labor leaders of social responsibility, including adoption of a code of principles of wage determination. It then treats balances between "planning" and freedom, self-interest and collective motives, and ideas and action in a democracy.

The book is packed with penetrating analysis, wise reflections, and challenging explorations. A reviewer can single out for comment only those things which seem to him of special importance or interest. Other readers would give a different emphasis, but none will fail to find in this book a great deal that is significant and interesting.

Clark considers the great danger to be totalitarianism as a threat to personal freedom and democracy, not economic collectivism as a threat to private enterprise. In his words,

> We in this country are properly defending, not private enterprise as it is —and it is not now fully "private"—but the right to develop and modify it by evolutionary methods, or at least by free and democratic methods, into something we hope will be more sound and satisfactory than the particular stage which quasi-private enterprise has now reached, or, for that matter, any of the stages that have preceded it. All democratic forces are our natural allies, including democratic socialists. Moscow has shown itself as much their enemy as ours (p. 6).

The author believes that totalitarianism will for some time be a grave threat to the continued existence of free societies, even apart from a shooting war which he does not regard as inevitable. An aggressive Russian nationalism, long frustrated, and a revolutionary gospel offering universal salvation to individuals through absorption in a great common purpose, are implemented with dictatorial command of great resources, a complete end-justifies-means "morality,"

and a formidable set of conspiratorial techniques. This diagnosis convinced Professor Clark two years ago that the Russian drive could not be contained short of an alliance for collective self-defense, with resistance by individual countries to any entering wedges of Soviet penetration, and adequate economic aid from the United States for rehabilitation of war-torn economies. He saw, however, that this would merely gain the free nations a breathing spell in which to tackle the difficult problem of reaching a basis of understanding with Russia. During this "breather," the free nations must put their own houses in order and work toward the development of institutions and altered attitudes necessary to world peace. Russia must be convinced that her own best policy is to live and let live with the free nations, because those nations are too strong to collapse or be captured and because their system is willing and able to live and let live with the Russian system.

Here we have a penetrating and judicious treatment of the totalitarian threat put in common-sense terms. The author's hope, expressed in the preface, that these thoughts would be commonplaces by the time they appeared in print has been realized, at least in considerable part, with respect to economic aid and the defensive alliance. Unfortunately, the same cannot be said with regard to the need for strengthening our democracy and our economic system by frankly recognizing defects and making improvements.

In Chapter III, Professor Clark presents, I think more clearly than before, his view of the basic problem of institutional development facing us in this transition era. The theme of history for many centuries has been, in his view, the quest for a balance between liberty and what he calls "a sense of belonging to something bigger than one's self and the psychological and material security that goes with this." In the four centuries from the beginnings of the Protestant Reformation to 1914 the dominant motif was liberty. For some centuries previously the authority and discipline of the Catholic Church had overshadowed the movement toward liberty. The nineteenth century brought an excess of individual liberty, going beyond a healthy balance. Totalitarianism is now punishing us by upsetting things in the opposite direction. We must find a better balance. And this must be fashioned in part with or out of values and institutions which we have to accept because American values are what they are, or because anything else would be administratively impracticable, or simply because they represent changes that are historically irreversible. Thus we must accept mass production and group power. We want the efficiencies of the former; and membership in labor unions or other groups fills an important psychological need of the individual, giving him the sense of belonging to something bigger than himself and security from exploitation. The following passages summarize the rest of the author's argument on this theme:

> What we have to evolve is a system that will be workable, starting with great corporate enterprises and labor unions, both possessing a great deal of power to protect themselves from competitive forces, and governmental agencies exercising increasing power over the outcome. . . .
>
> So the strategic fact of the inevitability of group power has led us to what seems the most basic economic principle of the present age and the visible future. It is that the amount of freedom we can keep is limited and measured

> by the degree of responsibility with which economic power is exercised, and limitations upon it are voluntarily accepted. . . .
>
> Irresponsible use of economic power leads either to chaos or coercion. As I have said elsewhere, a state cannot surrender to chaos, but it may lose its liberal character in combating it. So the objective is to establish ways of acting which may relieve our government from facing this hard alternative. . . .
>
> The aim is that organized groups, of capital, or labor, should have powers that can and will be used for salutary reduction of insecurity, and that these should be supplemented by public action in the fields of social insurance and stabilization of employment, while the use of these powers to the twin ends of monopolistic exploitation and inflation should be kept to a minimum which the system can safely tolerate (pp. 62-63).

We Americans also choose evolutionary change as preferable to abrupt revolution. This means working by trial and error and not pushing change faster than the system can adapt itself. Our present choice to maintain a system that is predominantly one of private enterprise does not mean that we want to keep it just as it is, which is in any case impossible since change is endless. It means rather that "we choose to let change come in the evolutionary way." The author recognizes "genuine ground for the fear that the requirements of the modern world are inconsistent with those of a free society," but declares emphatically that if we want freedom we can maintain the essentials of it. This will require voluntary restraint and social responsibility in the exercise of economic power, and the mutual confidence that can come only from recognition by each group, and by the government, "that the other has a necessary job," and "understanding of what it needs in order to do the job." It will also require wise and effective leadership and the capacity of the people to respond to this. Much depends, too, on education, not only to give better knowledge of social problems and processes, but also to help in developing a better morality. On our chances of coming through the transition successfully the author's attitude seems to be one of restrained optimism, rather than despair or naïve faith.

The first of the three chapters on spending, prices, and wages is an excellent summary statement, clear and understandable by all, of what economists know about the problem of assuring sufficient, continuous spending to maintain full employment by one who has contributed much to our knowledge in this field. Remarking at the outset that great advances in our knowledge of how to deal with this problem have made it "hard to say anything both new and true," Clark does not here attempt to break much new ground, but presents instead a discriminating appraisal of the usefulness and workability of the principal fiscal and monetary tools hitherto discovered for dealing with the problem. Many may disagree with some individual judgments, *e.g.*, the conclusion that serious credit restrictions are likely to be postponed until their result will be to precipitate an impending recession rather than to check a boom before it goes to unhealthy lengths. But few who give hard thought to these matters will be in sweeping disagreement with Professor Clark's appraisals.

Believing that a well-behaved system of prices and wages is a necessary

supplement to the most efficacious fiscal and monetary instruments for promoting substained full employment, Clark devotes two chapters to the perplexing questions of what constitutes "good" and "bad" behavior of prices and wages.

In a short discussion of inflation, one conclusion is that there is probably no harm in a slow, upward drift of prices averaging not more than two per cent per year, combined with short fluctuations that obscure the trend. Treatment of problems of inflation, good as far as it goes, is disappointingly brief, especially since the institutional development of the present era stressed by the author may contain a pronounced inflationary bias. Evidently he considered the question of the effects of downward price flexibility in depression worth the greater part of the lecture period.

Reductions in general prices and in particular prices, price decreases with and without wage cuts, reductions in margins above direct costs, changing relations between prices of raw materials, factory prices, and consumer prices—all these are systematically examined from the standpoint of the effect on total employment and production. The author concludes that although the effects are important, we know little about them and "can learn comparatively little about them by traditional kinds of analysis, based on the law of supply and demand for single products." His analysis, which again constitutes a concise summary of the present state of knowledge (or lack of it) on this problem, indicates why economists, evidently including Clark himself, are increasingly skeptical of the effectiveness of price flexibility in stabilizing employment and production. This is not a counsel of complete despair, however. He holds that the effects of some sorts of price reductions in facilitating private and public arrangements for stabilizing high-level demand can be predicted well enough to justify their inclusion in a combined program. The price chapter does not develop many principles of "good" price behavior but it will be valuable in keeping us on the right track and in avoiding fallacious proposals.

In the chapter on collective bargaining and wages, on the other hand, Professor Clark's principal concern is to formulate a set of principles of economically sound wage adjustments, following out explorations begun in *Alternative to Serfdom* and ideas suggested by Slichter, Dunlop, and others. Analysis of the question of economic limits on the level of wages leads him to these conclusions: (1) There is a *prima facie* case for maintenance of wages as a relatively stable proportion of national income. (2) Extreme increases or decreases in the general level of real wages would tend to reduce employment, but there is a wide range between these extremes where the outcome is uncertain. Clark suggests as possible examples of the limits an increase of wages that would cut profits in half and a reduction of wages by one-third. (3) Within the range of uncertain effects, the tendency to give the benefit of the doubt to higher wages is sound. There may be no automatic corrective for wages that are a little too low, whereas industry can generally raise prices if wages go a little too high. Here the author refers to his previous conclusion that an increase in prices averaging not more than two per cent per year is not serious. But, he warns, it is not safe to resolve all disputes in favor of higher wages,

and we badly need to gain better understanding of this problem. (4) That wages tend to rise into the zone where further increase (above the increase in productivity) means reduced employment is strongly suggested by the apparent fact that union organization and politics are geared to an annual increase in wages larger than the annual increase in productivity in the system as a whole. (5) At present, economic factors play a small part in wage adjustments and "their relation to standards of economic correctness is tenuous and doubtful."

The above points both indicate the need for formulation and use of a set of economically sound principles of wage adjustments and lead to the following principles which the author sets out: (1) The average of wages in the whole economy should increase at the same rate as the average of productivity increase. (2) Consideration should be given to the question whether current profits in the industry and in the economy as a whole are more or less than customary and whether they constitute a fair and adequate share. (3) Wage rates in the various industries should rise over a period of years approximately as much as the average increase in man-hour productivity in the whole economy, so as to maintain related rates for related types of work, with larger increases only to correct inequities between trades and industries. Prices should decline in industries where the gain in productivity has been greater than average and should rise in those where it has been less than average, except in declining industries where demand will not support price increases. (4) Temporary wage premiums to attract labor to an expanding industry or to share extraordinary productivity gains should not exceed an amount that the average gain in productivity can make up in a few years.

In the last chapter, Professor Clark examines the attitudes of management and labor and concludes that they are likely to become increasingly hospitable to the development of agreed codes for wage determination and other matters.

The author's analysis in developing his proposed code of wages will suggest many questions to economists and others. For example, is maintenance of the past proportionate division between wages and profits necessary in order to encourage sufficient capital investment for full employment? Or does maintenance of full employment require larger proportionate consumption than in the past, and hence lower profits and a higher wage and salary income? The author seems to waver between these views. Again, what sort of criteria of fair profits would command general agreement and be economically sound? As a final example, can the economy function well if wages and prices are settled more or less separately? Clark is silent on the question whether collective bargaining should or should not in any way touch prices.

Those who have struggled with questions of the sort taken up in these lectures will, however, regard this book as a notable step forward. And those who believe with the author that our mixed society can operate well only with voluntary acceptance and discharge of a considerable measure of social responsibility by unions, businesses, associations, and other groups with economic power will hope that Professor Clark's progress from the *Social Control of Business* through *Guideposts in Time of Change* will stimulate many others to work intensively on the crucial and challenging problems of developing codes

of principle, not only for wages but for price and profit policies and investment and inventory policies. More economists should turn attention to this "empty box," which is one of the emptiest and most important. Work of two kinds is required: that which brings advances in our technical knowledge and that which translates what we do know into practical codes. There is need and opportunity here for a variety of capacities and skills that will supplement and stimulate each other. To urge acceptance of social responsibility by power groups is fruitless and footless unless principles for its exercise are being developed.

DONALD H. WALLACE

Princeton University

Freedom and the Administrative State. By JOSEPH ROSENFARB. (New York and London: Harper. 1948. Pp. xiii, 274. $4.00.)

Mr. Rosenfarb maintains "that a planned economy is inevitable in the light of the historical evolution of social forces, but that we do possess a collective choice whether to make the administrative state dictatorial or free and democratic" (p. 231). His book, therefore, is opposed to the prevailing trend of economic thinking which, under the adverse impression left by shortcomings in the war and postwar economies, identifies economic planning not merely with waste but also with despotism. The present reviewer, regarding himself as a member of the same opposition, appreciates the timeliness of a book that takes issue with the contentions of the anti-planners. But in spite of a wealth of historical and sociological material, which Mr. Rosenfarb uses with deep understanding to buttress his arguments, his book is not likely to convince the unconvinced.

The reason for this poor prospect of success in argumentation is the direction of Mr. Rosenfarb's main interests, which are not those of an economist. He is a lawyer with rich administrative experience, and a student of history and sociology. Such a background is very valuable in dealing with the problems of planning, but the primary approach to them ought to be from the angle of economics, because a clear view of the functions to be fulfilled must precede the designing of governmental machinery for their fulfillment. We are still struggling with the issue of how to fit the price mechanism into a planned economy. Therefore, we do not yet see with all the desirable clarity how far a planning government, in its efforts to carry out the plan, can rely upon the initiative of the individuals (after having set the data to which individuals will react) and where a more direct exercise of regulatory powers will be needed. Because Mr. Rosenfarb's book does not bring any progress in this direction and gives only an inadequate picture of the results already achieved in the economist's controversy on planning, his very intelligent discussion of organisational and functional problems of government will still be met by the critics with the question: Are the democratic procedures which the author recommends really compatible with the nature of economic planning? To be sure no detailed blueprint of the economics of a planned system can be drawn up in advance, and insistence on an impossible degree of precision in the "plan for planning" is a favorite but illegitimate weapon of the

anti-planners. But to blunt this weapon, the proposed economic system should be pictured as lucidly as it is possible at this stage of the debate, and all considerations of political methods should be integrated into that picture.

Closely connected with the prevalence of political and sociological interests is a fault of the book which is at the same time the cause of one of its merits: Mr. Rosenfarb is trying to do too much on a very limited number of pages. His subjects range from the advantages of the British as compared with the American form of democracy to the rôle of the family in primordial society and to the intricacies of the Taft-Hartley Act. This broad approach prevents the author from concentrating the force of his reasoning on the decisive points but also makes his book very stimulating for anyone interested in the interrelationships of sociology, political science and economics.

CARL LANDAUER

University of California,
Berkeley

Business Fluctuations; Prices

Fluctuations in Income and Employment. By THOMAS WILSON. 3d ed. (New York and London: Pitman. 1948. Pp. x, 216. $4.00.)

Business cycles are the focus of two related issues of method in economics: verbal versus mathematical expositions of theory and historical versus econometric techniques of empirical investigation. Mr. Wilson's book is divided equally between a review and synthesis of modern business cycle theory and a study of cyclical fluctuations in the United States from 1918 to 1937. His theoretical inquiry, Part I, is verbal rather than mathematical. His empirical study, Part II, is, in his words, "of a direct nature" and avoids "involved" econometric techniques. Mr. Wilson is, quite properly, too much interested in his subject matter to offer any extended defense of his methods; and he neither excludes other techniques nor claims finality for his conclusions. But since he uses the tools of his choice with the greatest skill, his book illustrates well both the merits and the limitations of non-mathematical techniques. The advantages, which Mr. Wilson exploits to the full, are flexibility and inclusiveness in the explanation of historical events. The limitations, which even Mr. Wilson cannot escape, are the difficulties of tracing merely by inspection the chains of causation in a complex system.

The theoretical half of the book should be a valuable text for students of business cycle theory. It begins with a clear and balanced summary of the "classical"—"Keynesian" debate concerning effective demand. The exposition of the theory of interest rates is particularly helpful. The author brings equal illumination to the disputes surrounding the relation between consumption and the demand for investment goods. The high point of the three chapters on this subject is a brilliant refutation of the paradoxical conclusions Professor Hayek draws from the "Ricardo effect." After an inconclusive discussion of the effects of changes in money wages and a skeptical evaluation of the importance of monetary forces, Mr. Wilson presents his own synthesis of trade cycle theory.

The core of his theory is an accelerator-multiplier model of the cycle. Mr. Wilson is seeking a model with a self-generating cycle, but it is by no means

clear from the relationships he postulates that his model will reverse its direction. Because he avoids an exact formulation, he is not led to specify the lags or non-linearities required to produce cycles from an accelerator-multiplier system. Moreover, since Mr. Wilson relies heavily on the acceleration principle throughout the book, it is unfortunate that he perpetuates the error of relating investment demand to changes in the output of consumption goods alone; after all, the production of investment goods also requires investment goods. Defects in Mr. Wilson's theoretical model are not serious because the eclecticism of his approach permits him to depart from it freely. A large proportion of investment he attributes not to current changes in output but to technical progress. And for both turning-points, he lists ten alternative hypotheses.

Part II is an excellent brief history of United States business fluctuations between the wars. The author has an enviable prose style, and he is a master of the difficult art of making statistical material readable. Possibly because he views American trade cycles from overseas, Mr. Wilson is able to appraise government economic policy with a detachment and balance of which few American economists are capable. He does not find it necessary to blame the disappointing recovery of the 'thirties either on the New Deal or on secular stagnation.

Part II is more than good economic history. Mr. Wilson has attempted to employ the theory of his Part I to explain the economic fluctuations of the period and to confront competing theoretical hypotheses with the facts. Each phase of each cycle—especially each turning point—is examined to determine the consistency of various theories with observed data. In addition, Mr. Wilson undertakes to explain differences between cycles; for example, why was the recession of 1923 short-lived and that of 1929 prolonged?

This empirical study complements but is no substitute for econometric investigation. Mr. Wilson is able to weed out many theories as inapplicable to a given period by showing that they are obviously inconsistent with observed time series. But he is usually left with an embarrassing number of possible hypotheses. Lacking any quantitative estimates of the structural relationships of the system, he cannot evaluate the relative importance of these hypotheses. For example, when income and consumption both decline, Mr. Wilson cannot tell whether the fall in consumption was induced by the decline in income or was an autonomous contributor to the change in income. On the other hand, Mr. Wilson is better able than an econometrician to exploit information which is not easily quantified: *e.g.*, the state of confidence, political events, occurrences in particular industries.

The final two chapters—the concluding one added in this edition—contain Mr. Wilson's ventures into policy recommendation and prophecy. As a prophet, Mr. Wilson so far deserves honor. In the first edition in 1941, he did not succumb to the fashionable pessimism concerning postwar economic prospects. Neither does he predict secular inflation now. Whether or not they agree, readers of this book will appreciate the perspective of Mr. Wilson's outlook.

James Tobin

Harvard University

Money and Banking: Short-Term Credit; Consumer Finance

The Veil of Money. By A. C. Pigou. (London: MacMillan. 1949. Pp. viii, 150. $2.50.)

Professor Pigou in his latest book attempts to throw some new light on the old question of the significance of money in determining income and employment. Part I is devoted to a general discussion of the institution of money with special reference to the pricing mechanism and inflation. Part II, under the title, "Money Income," contains the substance of the book—a model designed to demonstrate the predominant factors determining the magnitude of money income.

Economists generally have regarded the problem so complicated as to necessitate simplifying assumptions. The most significant of the simplifying assumptions on Pigou's part is his abstraction from changing expectations. ". . . I shall leave out of account the fact that the several governing factors . . . are, on occasions, expected to be different in the future from what they are now" (pp. 65, 66). Next the predominant real factors influencing the magnitude of total money income are set off against the purely monetary factors. The real factors include the demand and supply of investment goods, labor efficiency and industry's monopoly power. Monetary factors, on the other hand, are conceived of as comprising the stock of money and its velocity in relationship to the rate of interest and the level of money wage rates.

The income velocity of money (or, in another sense, the real balances that people wish to hold) is determined in part by the transactions, precautionary and speculative attitudes of holders of cash, as also by the availability of "near" money. Velocity is an increasing function of the rate of interest (r) and a decreasing function of the portion of purchasing power accruing to non-wage earners, and the size of real income. The stock of money in circulation on the other hand, tends, via central banking policies, to be an increasing function of r and the purchasing power available to non-wage earners.

The demand curve for new real investment is a decreasing function only of r, while the supply of real savings is an increasing function of r, the size of real income and the proportion of purchasing power held by non-wage earners.

With these relationships established, Pigou's model is set to work. Although there are many refinements and modifications in his text, his main theme may be summarized briefly here. An increase in the demand for investment goods increases r, the argument proceeds, and thus increases both the velocity and the stock of money in circulation. This generally entails a higher wages bill; and, if money wages are constant, higher employment and higher real income result. If the income of non-wage earners increases, however, real savings increase, thus reducing r and, in turn, money income. This latter consideration minimizes the force of the initial impulse leading to a higher money income. Again, if an increase in investment activity does produce a higher real income, the resulting expansion of real savings would impose another limit upon the increase in money income.

On the basis of Pigou's formal model, an *increase* in money wages necessarily reduces employment and real income (p. 106). But when Pigou turns

to changes in money income not the product of money wage changes, his conclusions are quite different: *Stability* of money wages serve then only to exaggerate the cycles of employment (p. 118). But two forces may be employed to mitigate this latter form of employment instability, the control of wages and the regulation of the stock of money in circulation. This then is perhaps the basic conclusion of the work: that instability cannot be avoided save by the deliberate adoption of flexible wage policies and the judicious control of the money supply.

Attention should be directed to Pigou's unusual definition of inflation, a situation in which "money income is expanding relatively to the output of work—not the output of goods and services (real income) . . ." (p. 14). This effort to emancipate the concept of inflation from considerations of productivity seems intended to concentrate attention on the special interest of the writer, the level of employment. The further assertion that money "does not compromise any of the essentials of economic life" (p. 25) should also be interpreted in the light of this same special purpose. Even though Pigou points out that "the raiment (money) greatly affects the comfort of the body," one might well wonder if the structure of modern capitalism, at least in its free form, could long survive without it. But Pigou seems impressed with the necessity of giving adequate weight to the real factors that operate beneath the money surface, even though in his own model he points out that money is, indeed, much more than a veil.

The abstraction from expectations greatly weakens the applicability of Professor Pigou's conclusions to the economic world in which we live. For the most part Professor Pigou is content with an analysis of the *shape* of his functional relationships, but their quantitative importance, *viz.*, their *position*, in his own words, depends in large part on expectations. But perhaps Professor Pigou feels that it is better to offer modest conclusions on the basis of astronomy—working with more dependable variables—than to face the more spectacular issues of public policy on the basis of astrology—working with the erratic and often imponderable elements of expectations.

PAUL E. SULTAN

Cornell University

Money and Banking. By JAY L. O'HARA. (New York and London: Pitman. 1948. Pp. xx, 671. $4.75.)

This textbook is written for the beginning student in money and banking. The exposition is clear, free from excessive factual detail, expressed in simple language. At the end of each chapter is a summary of contents, a set of questions, and suggestions for further reading. The student should not find this presentation difficult to understand. As an introduction to money and banking this book should prove to be a welcome addition to the texts on this subject.

A short historical, descriptive, and theoretical treatment of money is followed by a more extended discussion of banking. Major emphasis is placed on the commercial banking system since it is considered ". . . the source of

virtually all of our supply of effective money" (Preface, p. vii). The utilization of considerable space to describe noncommercial banking is justified on the ground that commercial banking "... can be fully understood only as noncommercial banking functions are studied in some detail" (Preface, p. viii). A condensed history of banking in the United States is presented as a background for a better understanding of contemporary banking.

The objectives of monetary policy are briefly considered at the end of a chapter dealing with stabilization of the price level by means of the gold standard, bimetallism, credit control, one hundred per cent money, and other methods. Although emphasis throughout the book is on the value of money, stabilization of the price level is subordinated to maintenance of full employment. The "... achievement and maintenance of full employment should ... occupy a position of primacy as the objective of monetary policy" (p. 492).

As one means of realizing high level employment, "moderate increases in the general level of prices ..." are advocated (p. 493). This recommendation is based on the argument that businessmen anticipating greater profits as a result of price increases will be stimulated to expand employment and production. In the analysis no distinction is made between competitive and monopolistic conditions. The possibility that rising prices will cut down the physical volume of sales of goods in the market and thus destroy opportunities for employment is not considered.

A serious weakness of the book is the failure to give more consideration to Federal Reserve policy. Only occasional references are made to the System's past experience in realizing (or failing to realize) its objectives through the use of credit controls. The treatment of the Federal Reserve System is for the most part descriptive and mechanistic, consisting of a description of the structural organization of the System, an exposition of Federal Reserve Bank functions, and the mechanics of credit controls.

In the chapter on Keynesian economics the following policy is recommended. "The principal social responsibility of those in control of the supply of effective money is so to manage that supply as to keep rates of interest sufficiently below the marginal efficiency of capital to insure a rate of investment that will provide full employment. At the same time, interest rates must be prevented from falling to a level so low that savers prefer to hold their wealth in money form rather than offer it for productive employment" (p. 466). Precisely how to choose and set rates of interest that will harmonize with the above requirements is not revealed. The presumption is that, if proper rates of interest are not (or cannot be) established, the effects will be evident in "... declines in effective demand, output, employment, and money income, that result from the low level of investment when private entrepreneurs refrain from putting to work all of the funds that are being saved" (p. 464). The solution to this problem is "... simply that what the private sector of the economy fails or refuses to do must be done by the public sector.... it is necessary for the government to step in and borrow the otherwise idle hoards of savings. ... The funds that they (*i.e.,* government) borrow and spend *will* find their way into the markets in effectuating a higher level of aggregate demand ...," employment, and income (pp. 464-65).

The chapters on foreign exchange discuss the functions of banks in financing foreign trade, determination of foreign exchange rates under both gold and paper standards, foreign exhange practices growing out of depression and war, development of international monetary cooperation, establishment and operation of the Bretton Woods institutions, and American financial aid to foreign countries.

In the analysis of the determination of the value of money the transactions and cash-balance equations discussed under the title of "conventional approaches " are found to supplement one another. The Keynesian analysis is isolated for special treatment in a separate chapter under the title of "income approach." Keynesian theory seems to be utilized primarily to explain the determination of the value of money and incidentally to explain changes in the level of employment and the national income.

A variety of contemporary problems is considered in the final chapter. The methods and effects of war finance, postwar inflation, postwar effectiveness of the traditional methods of credit control by the Federal Reserve System, stabilization of the economy through a combination of monetary and fiscal policy are discussed very briefly.

RAYMOND H. LOUNSBURY

Dartmouth College

Volkswirtschaftliche Theorie der Liquiditaet. By OTTO VEIT. (Frankfurt M.: Vittorio Klostermann. 1948. Pp. 167.)

This book is not only a valuable indication of the present state of monetary theory in Germany, but it is also a major contribution to the field. The author, a professor of economics at the University of Frankfurt, is also president of the Land Central Bank of Hesse, and as such also a member of the board of directors of the Bank deutscher Laender.

The purpose of the study is to clarify a series of economic problems by fitting them into a framework organized around the concept of liquidity. Liquidity is defined as "die durch Tauschgueter repraesentierte Verfuegungsmacht ueber Bedarfsgueter" (p. 12). Every commodity has some liquidity characteristics; to the extent that they predominate, the commodity is a "Tauschgut." It follows that the demand for liquidity need not be related in any definite way to the demand for money. For ordinarily money is merely at one extreme of the spectrum: it is the only commodity which is always and exclusively "Tauschgut" and never "Bedarfsgut"; goods in process of production are frequently at the other extreme. Both the level of liquidity and the degree of liquidity of commodities depend on such factors as the organization of the economy, customs and habits, the level of income (the proportion of savings is uncritically assumed to increase as national income increases [p. 27]), and the stage of the business cycle.

The purpose of liquidity is the acquisition of "Bedarfsgueter" by exchanging them for "Tauschgueter" (p. 14). The desire for liquidity is, in turn, explained in terms of the motives listed by Keynes in his explanation of liquidity preference. (The author states in his introduction that due to war and postwar conditions, more recent foreign literature was sometimes not

available to him.) The desire for liquidity as an end in itself is considered strangely as being pathological (pp. 16, 137), even though fear of the future and the desire for independence—which are hardly pathological—are given as reasons. Such a desire, if made effective, is supposed to block the circular flow of the economy; perhaps it is this result which is considered pathological.

The above concepts are then applied to various monetary problems. The control of money provides the possibility for the creation and distribution of liquidity. Money is treated as a veil which hides the basic characteristic of the concept of liquidity, but does not alter it. Interest is the price which regulates the market for liquidity: it keeps the supply of and demand for liquidity in equilibrium. Interest is created by renouncing consumption in favour of liquidity, and at the same time renouncing a high degree of liquidity; the lower the degree of liquidity, the higher the interest rate. Interest is thus the reward for non-spending *and* for its investment in relatively illiquid form (not-hoarding). The author sometimes comes dangerously close to regarding willingness not to spend nor to hoard as sufficient (p. 99); but such willingness is sufficient only in the presence of adequate demand for liquidity. In fact, the requirement of demand is somewhat neglected throughout. For example, the discussion of inflation and deflation (p. 54) is not very helpful in the absence of specified income assumptions. Similarly, the statement that demand for and supply of liquidity must be in equilibrium in order for the economy to be in equilibrium is not very useful without an analysis of the kind of equilibrium and the interrelationships between the latter and liquidity.

In the final chapter the apparatus is applied to some problems of international trade. It is shown how the "automatic" gold standard might present an ideal possibility of equalizing liquidity between nations, given the necessary assumptions and provided the rules of the games are adhered to by the participants. It is also indicated how institutions like the International Monetary Fund could fulfill a similar function.

Though a short review can hardly do justice to the stimulating analysis, it is hoped that it has at least whetted appetites.

HANS A. ADLER

Harvard University

Business Finance; Investments and Security Markets; Insurance

Government Financing of Private Enterprise. By DOUGLAS R. FULLER. (Stanford: Stanford University Press. 1949. Pp. viii, 206, $3.00.)

This is a study of the financing problems of business, particularly small business, and the government's rôle in resolving them. Although readable and informative, it is repetitious, contains considerable background material not directly related to the main topic, and suffers from a few organizational and structural weaknesses.

Since the case for government financial assistance to business rests largely

on the assumption that there are significant gaps in the existing private credit mechanism, Dr. Fuller begins his study with a brief examination of this premise, followed by three chapters of historical background information, domestic and foreign. The remainder of the volume is largely devoted to an analysis of government credit assistance to business since 1934, particularly through the Federal Reserve banks, Reconstruction Finance Corporation, and the wartime V-loan program, for the purpose of determining the need for continuation of such programs or the development of new programs.

The volume of business lending by the Federal Reserve banks approximated that of RFC during the years 1934-1937, but after liberalization of the RFC Act in 1938, RFC became the dominant government agency in this field. The most impressive fact concerning prewar experience under these two programs, according to Dr. Fuller, is the small volume of loans. He rules out application of unduly onerous terms and conditions by the administering agencies as a possible explanation for this, since "no trustworthy evidence has been introduced to prove that the standards applied were appreciably stricter than was necessary to conform with the instructions of Congress that loans were only to be made when reasonable assurance of repayment existed." The explanation is found instead in a lack of unsatisfied demand for medium-term credit principally because of the growing willingness of private lending institutions to extend term credit. Heavy postwar lending by RFC under its Blanket Participation Program (instituted in 1945 and terminated in 1947) arose both because of increased demand, especially to finance fixed-asset expenditures, and because RFC's participation terms proved attractive to private bankers.

The discussion of wartime government financial assistance, particularly the V-loan program, is clearly the most authoritative section of the book, reflecting careful study and familiarity with operating details gained by the author through first-hand experience. Several points commonly suspected concerning this program are confirmed, particularly the high average guaranty percentage (90 per cent being the most common), which generally showed little correlation to the strength of the loan, and the greater liberality of the War Department than the Navy Department or the Maritime Commission on eligibility, amounts, and maturities.

Particular significance is attached to the V-loan program, not only for its important contribution to increased production but also because the experience which private bankers gained under this program contributed to their willingness and competence to meet present-day needs. Important in this regard were stress on ability rather than collateral, experience in budgeting loan requirements and repayments, and emphasis on the importance to smaller borrowers of adequate technical assistance and accounting procedures. At the same time, the author recognizes the threat to private banking in the new respectability of a government guaranty, but he feels that reckless use of such guaranties can be prevented by requiring substantial private-bank participation.

The author's major conclusions and recommendations are as follows:

1. Little has been done, either by government or private agencies, to remedy

the serious gap in availability of equity and long-term loan capital for small business. However, he regards government provision of risk capital incompatible with free enterprise, and commercial-bank investment in such capital incompatible with the demand nature of their liabilities. His proposed remedies for this gap accordingly include revisions in the tax structure to revive former major sources of such capital, and creation of new private local financing institutions.

2. Although government experience prior to 1945 indicates no serious gap in medium-term financing, the large volume of RFC loans of this type since that time suggests the existence of a gap of minor proportions. (This gap may be more significant than Dr. Fuller concedes, as indicated by the sharp increase in RFC lending during the past year.) To assure adequate medium-term financing, he recommends continuation of RFC (but not Federal Reserve) authority, both as a competitive spur to private lending institutions and for standby purposes.

3. With respect to short-term credit, government experience provides "convincing evidence" that no significant gap exists.

4. Finally, he recommends two collateral government aids to small business investment: Exploration of methods for reducing costs of financing and provision of increased technological and advisory services.

The almost simultaneous appearance of this volume and A. D. H. Kaplan's study of *Small Business: Its Place and Problems* is a reminder that facilities for coordination of economic research may still be inadequate. On the financing issue, both volumes cover much of the same ground and arrive at many similar conclusions and recommendations. The Fuller volume, however, in most respects is more comprehensive and fills a long-felt need for an examination of the necessary rôle of government in business financing. But there are numerous additional problems in this general area which might have been studied with the same investment of time and resources had this overlap been avoided, including a detailed examination of standards employed in government lending programs.

James B. Eckert

Washington, D.C.

Business Finance. By Carl A. Dauten. (New York: Prentice-Hall. 1948. Pp. xiii, 551. $4.75.)

This book treats the same general topics as are treated in an ordinary finance text but it differs from typical texts in that it places the greater emphasis upon those aspects of finance which are of most concern to small business enterprises. Within this field much more attention is given to the financing of current operations and less to the raising of initial fixed capital than is customary. This statement does not imply that Dauten neglects the latter subjects but only that he devotes a greater amount of space to discussing problems that confront business enterprises continuously than to those which need to be solved but infrequently.

Teachers of conventional corporation finance courses will probably find

the book most useful to students as supplementary reading on sources of short-term capital. For example, an entire chapter is devoted to methods and procedures for obtaining current funds from banks, another to describing term loans, and a third to R.F.C. loans. Often the treatment is detailed, even to the extent of presenting an exhibition of forms and a list of addresses, (for example, two pages are used to list the addresses of the thirty-one R.F.C. agency offices).

The volume incorporates and makes copious use of much recently published material dealing with the problems of small business. Among other things it contains brief summaries of many of the pamphlets published by the U.S. Department of Commerce, and repeats the findings of the T.N.E.C. investigations. The author draws heavily on the writings of Neil Jacoby, Raymond Saulnier, Tynan Smith, Charles Schmidt, and other recent writers who have treated special financing procedures and problems.

Business Finance is not suitable for use as a text in corporation finance, largely because of its almost exclusive concern with small enterprise but also because the treatment is rather elementary for college level use. It is the kind of book which one about to start a small business should read and keep accessible. Within the scope of its objective—an explanation of the principles and methods of finance applicable to small business enterprises—the author has done an excellent job and has supplied a book that fills a gap in existing literature.

WILFORD J. EITEMAN

University of Michigan

Surety Rate-making—A Study of the Economics of Suretyship. By JULES BACKMAN. (New York: Surety Association of America. 1948. Pp. xix, 492.)

This book was prepared by Dr. Backman under the sponsorship of The Surety Association of America, an association of stock companies writing almost three-fourths of the fidelity and surety bond business. Dr. Backman was given full control of the study and, judging by the evidence within the report, he has produced an unbiased, objective analysis.

While the book is of greatest concern to those specializing in suretyship and insurance, it is of interest to economists as a study in pricing in a field where price determination is attended by unusual difficulties and where governmental regulation is assuming a more important rôle. Although it is difficult to omit any sections of the study, the economist, as compared with the insurance specialist, will find most valuable, Chapters 4, 8, 11, 12 and 14 on "The Rating Bureau and Competition," "Cyclical Aspects of Suretyship," "Principles and Mechanics of Insurance Rate-making," "Surety Rate-making," and "Surety Rate-making: Recommendations." In these chapters are included the author's principles and theories of pricing. A good case is made for regulated cooperation rather than free competition in surety rate-making. In other chapters, the author provides the background for the study and develops and analyzes the statistics on which his conclusions rest.

A wealth of statistics in the field of suretyship is presented in the book. These will be of greater value to the insurance and suretyship specialist than to the economist. Some had been published previously in scattered sources, but many are available here for the first time. Some of these are the heretofore unpublished results of studies made by surety companies for their own information; some are the results of special inquiries and analyses of their experience made by several companies purely for this study. Throughout the work, the sad lack of uniform, detailed statistics in the industry is evident. Dr. Backman has been forced to use data which, having been compiled on varying bases by different companies, is of questionable comparability. Suggestions are made to improve the statistics to be gathered in the future. In the area of expense statistics, improvement no doubt will result from the uniform accounting regulation of New York under which companies now are operating, but only since January 1, 1949.

One point which the author makes in a number of places (to cite just a few, pages 9, 291, and 314) is that, "surety bond prices are among the few prices which are now the same or *lower than* before the war." Further, "a price decline in such a sea of inflation is an achievement worthy of note." This emphasis seems unwarranted and incorrect. True, rates have been reduced. True, expenses as contrasted with losses consume a larger proportion of the premium dollar than in most insurance lines. But, exposures have increased so that larger amounts of coverage are required for the same protection. Whether prices, as distinct from rates, have actually decreased or not, depends upon the relationship between the decline in rates and the amount of coverage now required for the same protection as heretofore. In any event, the decline in surety bond prices is not as great as may be inferred without this qualification. Furthermore, it is not a very remarkable achievement, since, as the author points out elsewhere, the postwar period has been one of very low loss ratios and very high underwriting gains, even though the companies have been operating at the lower rate level.

There are two possibilities in the surety rate-making problem which do not seem to have been adequately explored. One, not even given passing mention in the book, is the possibility of charging a policy fee to cover fixed expenses, since the expense factor is predominant and heavy expenses in many bonds are unrelated to the bond penalties, and a premium to cover the hazard and variable expense element. The other is the possibility of applying a "pure premium" technique, similar to that of workmen's compensation. This is a possibility if measures of exposure can be determined for each type of bond. For many such, measures can be determined and for these at least the method would be applicable. The fact that very long term experience must be used does not preclude this method. The fact that there are many classifications with very small volumes of experience has not proved an insurmountable handicap in workmen's compensation insurance.

C. M. Kahler

University of Pennsylvania

Public Finance

Current Financial Problems and the City of London. Published for The Institute of Bankers by Europa Publications Limited. (London: 39 Bedford Square, W. C. 1. 1949. Pp. 219. 15*s*.)

The series of thirteen papers contained in this volume were originally presented as lectures at the International Summer School of the Institute of Bankers, held at Oxford, England, in September 1948. With few exceptions, the authors are financial journalists, among them several of the leading editors of, and contributors to, Britain's renowned financial press, including the well-known editor of *The Banker,* Mr. W. T. C. King. There are also papers by Roy Harrod, R. S. Sayers, and Sir Henry Clay, to mention some of the professional economists who were invited to lecture at the school.

While this symposium is addressed primarily to the student of London's financial mechanism and the institutional structure of British banking, several studies contain comments of more general interest to American economists. This is particularly true of the paper by W. F. Crick, general manager for research and statistics of the Midland Bank, whose skillful exposition of the rôle of monetary policy in postwar Britain contains much of relevance to other "mixed" economies in Europe. Nobody will be surprised when Mr. Crick visualizes monetary policy as playing a relatively small part among other factors in the shaping of a comprehensive economic policy in Britian. Yet Mr. Crick very properly points up the fact that monetary policy and its twin brother, budgetary policy, can together still be of large importance in a semi-controlled economy, depending upon whether they are in harmony or conflict with the trend of physical controls.

Roy Harrod, in a paper entitled "The Financial Position of Britain and the Balance of Payments," comes forward with a number of suggestions that run counter to generally accepted doctrines. There is now wide agreement both in this country and in Europe that Britain's salvation, no less than that of Western Europe as a whole, lies in a substantial expansion of its plant and equipment. Mr. Harrod, however, is worried over the current rate of capital investment in Britain. The country's steel program, he observes glumly, is grossly excessive, and according to his gloomy forebodings the mechanization of the coal mining industry will lead to acute unemployment before many years have elapsed. He reiterates his familiar thesis that the roots of Britain's balance of payments difficulties lie essentially in excessive capital outlay and that investment expenditures should be cut sharply. American observers, alive to the urgent need for modernizing and expanding much of Britain's industrial plant if that country is ever to achieve financial equilibrium, will find it difficult to accept this line of reasoning, from a longer-run point of view at least, though they may readily agree with Mr. Harrod's counsel that certain investments could well be postponed until Britain's general position has eased.

Professor R. S. Sayers, in his brief lecture entitled "Some General Aspects of Central Banking," calls attention to some worthwhile fields of action that central banks could cultivate with advantage to themselves and

their economies. It is the function of central banks, Professor Sayers maintains, to seek out the sensitive spots in their economies and be ready to adopt novel weapons to deal with them. Professor Sayers enters controversial ground when he argues that central banks, having close contact with all parts of the financial system, are institutionally better adapted than Treasuries for the actual exercise of control. But one may readily agree with Professor Sayers' suggestion that central banks, if they wish to be as useful as possible, must not be unduly conservative but must develop new techniques to meet new situations. These are doctrines that have successfully been put into practice in recent years by the authors of central bank statutes in various parts of the world.

Sir Henry Clay's valuable appraisal of the evolution of the sterling area reaches the conclusion that Britain derives great advantage from its relations with the rest of the sterling area and that it would be folly to adopt any policy that aims at breaking it up. Now that much respectable opinion looks at the sterling transferable-account system as one of the principal devices for creating a new intra-European payments mechanism, many a reader may well have expected a somewhat more positive approach toward the future of sterling in international, and particularly, European trade.

In many circles, it has lately become fashionable to speak of the Bretton Woods "twins" in a deprecatory tone. Mr. Paul Bareau, deputy city editor of the *News Chronicle* and frequent contributor to financial magazines, has successfully resisted this temptation in his paper on "International Banking Organizations." Of the two institutions, the Fund comes out much better than the Bank in Mr. Bareau's appraisal. He acknowledges that the United States government has used its dominant voice in the affairs of the International Monetary Fund wisely and constructively. Mr. Bareau concludes that while the Fund has compromised on some fundamental issues of its code and has been guided too much by political considerations, it has nevertheless performed a very valuable function by keeping alive a modicum of cooperation in the field of international monetary relations.

In his evaluation of the Fund, Mr. Bareau very properly points out that the economic climate of the postwar years could hardly have been less favorable to the Fund's objectives, but this is perhaps even more true of the Bank. When Mr. Bareau feels unhappy over the fact that the Bank lacks a spirit of adventure and has been too much concerned over the interests of United States investors, who after all put up much of the Bank's loanable funds, he appears to forget that international investment, to flow smoothly, persistently, and on a large scale, needs a political and economic environment radically different from that prevailing during the last few years. Before charging the Bank with unimaginative leadership and lack of adventure, we should carefully consider the Bank's contention that it has found a great lack of soundly conceived projects suitable for its financing. The fact that it has refused to put up money for projects that it considers neither sound nor productive in the light of the present disequilibrium in the world economy provides very little justification for Mr. Bareau's criticism that the Bank "tried to eschew the adventurous."

For the American reader who is interested in an authoritative study of London's financial facilities, Mr. King's paper on the London Discount Market contains much valuable information. This is also true of Mr. Steffenburg's lecture on "Merchant Banking in London" and the study by David Sachs entitled "Survey of the Financial Institutions of the City of London."

F. H. KLOPSTOCK

New York, N.Y.

International Economics

Plowshares into Swords. By OSWALD P. CHEW. (New York: Harper. 1948. Pp. xv, 227. $3.00.)

This book undertakes to indicate the adjustments that are needed in the world by reason of the fact that the United Kingdom, Belgium, Germany, and neighboring countries in the Western world, and Japan in the Eastern world, by stealing a march on the rest of the world, were able to develop far-flung markets for their factory products, and now are faced with the loss of some of their former markets because the rest of the world is slowly industrializing. Others have written on this subject, but none from Oswald Chew's point of view, which is that of a person who has spent his life in the public information service of the United States Department of Agriculture, and, in consequence, has come to see events and developments very sharply in an agricultural focus. Chew writes with the vigor and clarity of a successful journalist, and hence even a sophisticated reader needs to keep his wits about him or he will lose his bearings.

This is not to say that there is little sound analysis in this book. In fact, there is just enough that isn't to lead the author to the dubious conclusion that since the Industrial Revolution the principal cause of wars has been a contest for farm lands; to use the author's phrasing, "modern war is war for farms." The result is a book too much for the comfort of a scholar, in the same class as Vogt's *Road to Survival,* Osborn's *Our Plundered Planet,* Pearson and Harper's *World Hunger,* and Prentice's *Food, War and the Future.*

One is usually helped in thinking through such situations if one first thinks in interregional terms within one country. The natural parallel in this case is the industrial Northeast in the United States. This Northeast has lost a market for particular factory products as, first, the Midwest, and later the South and West, have industrialized. But the Northeast is still growing industrially. It has lost only in percentage of the whole. The latter is true even of little New England. There are those in the Northeast who are unhappy to see the South and West growing faster than the Northeast, but the only reasonable program for its inhabitants is to see that they readjust their industry so that it fits as closely as possible into the changing national economy. The national interest is in getting all parts of the country industrialized in proportion to the resources, and in having each industry grow where it has most advantage. The important consideration for the Northeast is whether the industrialization of the rest of the United States adds enough

to the total national income so that the Northeast's share of it is an increasing absolute amount.

Could such a national development leave the Northeast with less industry absolutely? Surely so, although this is not likely. Also, if it does, other economic activity is likely to replace it.

Now suppose the Northeast were a separate nation. The international interest would be the same as the national interest so far as Northeast, South and West are concerned. But what would the Northeast itself do in such a situation? Obviously it would do all possible to enable existing industries to continue to compete by making them more efficient, by seeking alternative new markets, and the like. Some of its existing industries would find they had comparative advantage and expand, and others would contract. Also some new industries would probably be found. All this would be good internationally too. But Chew's doctrine is to the effect that these measures would not suffice, and the Northeast nation would in due time engage in actual military conquest of the *farm lands* of the South, and West or Midwest. Why farm lands in particular? *So as to be able to produce within its own boundaries the food that it could no longer get by exchanging factory goods for it.*

He says further that even the industrial nations with big foreign markets, except the United States, which has all the land it needs, will presently engage in such conquest so as to be *sure* of having *food* enough, for who knows when they may not lose some outlet, or go to war and face a food block.

He believes that both world wars were induced in this way, and another one will be if we do nothing to prevent it. Surely most historians will consider this a narrow and distorted view of Germany's and Japan's desire for "lebensraum." It happens that the territories most available to both of these countries were exporters of farm products; but had these territories been rich in coal, iron and oil rather than food, they would have been considered much greater military prizes. Consider the Ruhr and Silesia in this connection!

It is true that both world wars did make these countries, the United Kingdom, and some others, want to be more nearly self-sufficient in food; but surely they were no less concerned over sources of iron, oil, and coal. Also, shortage of exchange figured in both postwars, but especially in the second. The vigorous farm price-support measures after World War I came mostly with the break in farm prices from 1928 on, and were directly a response to pressure of the agricultural interests. No doubt the military sufficiency argument strengthened the hands of the agrarian politicos of Europe; very little those of the United States.

The cases of present Germany and present Japan have to be considered in a class by themselves. The readjustments which they need are greatly complicated by the second war.

Chew proposes as a general solution some form of international agreement that will assure industrial countries of their foreign outlets, or delay the loss of them while adjustments are being made, and at the same time assure them of a food supply.

JOHN D. BLACK

Harvard University

ARABIAN OIL. By RAYMOND F. MIKESELL and HOLLIS B. CHENERY. (Chapel Hill: The University of North Carolina Press. 1949. Pp. 201. $3.50.)

Among those who, for one reason or another, are interested either in the economic problems of the Middle East or in international raw materials problems or in the oil industry, it will be pretty generally admitted that the title of this valuable little volume is inaccurate and too modest. As the table of contents shows, only about thirty pages are devoted *exclusively* to oil developments and issues in Saudi Arabia. There is a subtitle "America's Stake in the Middle East" which comes nearer to describing the scope of the work; but the (I am sure, unintended) implication that America's stake in the Middle East is identical and coterminous with the American-owned oil concession in Saudi Arabia is politically unsound and it is amply (if tacitly) refuted by the aggregate of facts adduced in the book itself.

Actually what Mikesell and Chenery have done is: (1) To assemble and interpret all the significant statistical data on Middle East oil and its place in the world fuel economy; (2) To describe the contractual arrangements which govern Middle East oil production and trade, and to analyze the problems (commercial and diplomatic) which derive from this clumsy and unstable pattern; (3) To describe particularly (and as a sort of case study) the various facets of the American concessionary position in Saudi Arabia—the diplomatic, legal, commercial, financial and managerial issues that have arisen; and (4) to appraise the depth and scope of the United States national interest in Middle East oil, and to evaluate the impact of this oil on American foreign policy and vice versa.

For all these services we are in the authors' debt. The factual compilation alone merits praise. The facts are in general not new (indeed, some of the statistical information is, inevitably, already obsolete); but the material is nowhere else available in one place, being scattered through government documents, the petroleum trade press, and a few journal articles. The analysis is penetrating, sound and modestly presented. The specific data on Saudi Arabia tell a fascinating story in concise form.

On the very broadest issues of policy one might cavil. If I read pages 124-25 correctly, the authors would like the experts of the American oil industry to work out an import program that would take account of all domestic interests and activities (including the experimental). To some extent this already happens but I had not supposed economists would commend it. By implication on pages 95-100 and explicitly on page 127 the authors urge ratification of the Anglo-American Petroleum Agreement, thus flogging a quite dead horse. On pages 121 and 128 the authors urge a United Nations conference to establish a world petroleum organization; despite a footnote on page 100 quoting me to the contrary, I do not now think this recommendation is in the realm of reality.

On page 119 it is stated that "American (oil) companies operating abroad can in general be counted on to abide by the wishes of (their) government." That is very nice.

JOHN A. LOFTUS

Washington, D.C.

Imperfect Competition in International Trade. By S. B. RANGNEKAR. Edited by J. J. Anjaria. University of Bombay Econ. Ser. No. 1. (Bombay: Geoffrey Cumberlege. New York: Oxford Univ. Press. 1948. Pp. xvii, 184. $8.)

As its title indicates, this monograph is a study of non-perfectly competitive pricing as applied to the field of international trade. The basic approach follows the neoclassical reciprocal demand tradition in contrast to the specific commodity approach commonly used in investigating monopolistic pricing in world markets. The study is theoretical in the sense that cases are investigated without detailed preliminary investigation of their relevance for any particular historical setting. Exchange control, for example, is almost ignored, although some of Dr. Rangnekar's conclusions may conceivably have some applicability to such arrangements.

The investigation of various types of pricing arrangements is divided into monopoly and oligopoly, with a number of specific cases considered under each head. Under monopoly pricing, for example, four cases are considered, distinguished according to the number of countries supposed to be engaged in trade and according to whether one country monopolizes the marketing of all its exports or only one. Under oligopolistic pricing, more complicated arrangements are each investigated in turn. Dr. Rangnekar then attempts in a separate chapter to assess the implications of restrictive practices on both national and international welfare. The welfare analysis rests mainly on Professor Pigou's work in this field, combined on occasion with the currently popular "as t'were" doctrine. A final chapter attempts to assess how the earlier analysis should be modified if uncertainty is assumed. Money is introduced at this point and a monetary theory combined from various ideas of such diverse thinkers as Keynes and Mises is constructed. For such eclecticism, one can only commend the author's courage.

Like many doctoral dissertations, this work is mainly of the exercise variety designed to reveal the student's competence in his field. Those already familiar with the literature in international trade theory are not apt to find a careful reading of the book rewarding. Even as an exercise in economic analysis this study has serious limitations. The writing is frequently vague and at times inexcusably jumbled. Conclusions are commonly stated in the comparative form without the alternative mentioned. As a result of the poor quality of the writing, it is impossible to determine at a number of points just what views Dr. Rangnekar is attempting to demonstrate and hence permit a judgment of their validity. There are, in addition, a number of technically inaccurate statements. One is surprised to learn that the inelastic portion of a monopolist's demand schedule is the only relevant portion to him, and that monopoly power in the pricing of products automatically carries with it monopsony power in the buying of resource services. Such a statement as ". . . there is agreement that capital goods embody waiting" makes one wonder if the author has ever heard of F. H. Knight. These deficiencies loom less large when compared with the enormity of the task which Dr. Rangnekar set himself to handle in brief compass. Nevertheless,

it is unfortunate that this work was published in its present form, especially since it inaugurates the Economic Series of the University of Bombay publications.

EARL R. ROLPH

University of California, Berkeley

Gli Ammodernamenti della Teoria degli Scambi Internazionali. By AMEDEO GAMBINO. (Padova: Cedam. 1946. Pp. 61.)

The booklet was written by a professor of economy of the University of Rome and was published by the Economic Institute of the Bocconi University in Milan. It deals with the progressive innovations in the theory of international trade and exchange, and its distinctive feature is an abstract and syllogistic method of analysis.

The purpose of Professor Gambino is to reinterpret the classical postulates of comparative costs and advantages in the light of the modern "equilibrium" theory. The author reviews the various theories of international trade from Ricardo and Mill through Marshall to Haberler and Ohlin. He accepts the assumption that "monetary" costs and not "real" costs determine the flow of international trade, but pursues the inquiry into the relative differences of monetary costs (or Haberler's "substitution" costs) among various countries. He finds that such differences are the result of the combination of productive factors prevailing in each country—and concludes that the relative advantages in international trade are for each country the same as those which may be established for domestic trade.

Of particular interest is the chapter of the book and an introductory note by Professor DeMaria on an "unfortunate criticism" by Pareto of Ricardo's theory of comparative costs. According to Pareto, Ricardo's theory serves to demonstrate a "possible" condition and not the necessary and only condition under which the international movement of goods can occur. Professor Gambino's view attributes Pareto's position to the fact that goods move in international trade if their relative costs are within the margins of their comparative costs in the various countries. Professor DeMaria observes, however, that a country may continue to export goods produced at disadvantageous comparative costs, if such commercial loss were lower than the alternative of closing and liquidating existing investments in export industries.

The author offers some stimulating thoughts, expressed in a very concise form. The booklet could be very usefully expanded, to provide a more readable text on the general subject of the historical development of theories of international trade.

FRANK M. TAMAGNA

Washington, D.C.

Industrial Organization and Markets; Public Regulation of Business

Cartels in Action. By GEORGE W. STOCKING and MYRON W. WATKINS. (New York: Twentieth Century Fund. 1946. Pp. xii, 533. $4.00.)

Cartels or Competition? By GEORGE W. STOCKING and MYRON W. WATKINS. (New York: Twentieth Century Fund. 1948. Pp. 530. $4.00.)

These books are the first two of three volumes sponsored by the Twentieth Century Fund about problems of monopoly, national and international. The first contains case studies of international cartels. The second presents an analysis of cartel activity and an appraisal of its economic impact, together with recommendations as to government policy toward cartels. Thus the two books already printed constitute a full discussion of the international cartel aspect of monopoly problems. A forthcoming book is to be devoted to domestic problems of monopoly.

Volume One supplies a long felt need for relevant data. Facts and documents aplenty have been available in the cartel cases in the Department of Justice, in the records of the Bone, Kilgore, and Truman committees, the Nye committee, and in various special monographs and reports. But this information has been so scattered and disorganized as to be useful only to specialists. Considerable literature of comment has been available, but it has fallen into four classes: scattered monographs of varying quality about particular cartels; analytical summaries by foreign authors, completed before many of the relevant facts were disclosed; propaganda in defense of cartel activities or particular cartels; and impassioned condemnations of cartel activities or particular cartels. Since the war, this literature has been supplemented in the United States by several publications concerned with government policy toward cartels. But there has not been available a single volume in which the facts about the more important cartels are set forth and subjected to careful analysis.

Cartels in Action does not, of course, cover all of the cartel arrangements that have been disclosed in recent years. Since there are more than 100 of these, an attempt at such coverage would have prevented an adequate account of any of the cases. Instead, the book selects for careful analysis eight outstanding examples: sugar, rubber, nitrogen, steel, aluminum, magnesium, incandescent lamps, and chemicals. These examples have been so chosen as to include basic raw materials of agricultural origin, as to which cartel activity has depended largely upon government support; primary metals, privately controlled by large companies which have succeeded in dominating well-defined industries; and electrical and chemical products, as to which cartelization has depended upon the ability of large companies to control technological change and to maintain lines of jurisdiction in spite of the fluidity of industrial boundaries. Cartelization in the chemical industry receives special attention in chapters which first survey the broad organization of the industry throughout the world, then deal with the development of product cartels within the industry as illustrated by the two cases of alkalies and explosives, then describe the comprehensive patent alliance between DuPont and Imperial Chemical Industries, and finally discuss at length the activities of I. G. Farbenindustrie.

Statistics, documentary evidence, and economic analysis have been blended in these case studies. There is no equally authoritative picture of the broad

sweep of cartel activity. In particular instances, for example the chapter on sugar, the authors appear to have slighted the operative techniques of cartelization in their care to analyze the market situation within which the cartel operated. In the sugar chapter, too, there appears to be some variation in the authors' assumptions as to the elasticity of demand and as to the relation of prices to marginal costs, as well as a willingness to assume too readily that losses by producers are disastrous to the world economy as well as to persons directly involved. In the nitrogen chapter, the authors do not bring out the extent to which producers of synthetic nitrogen have used the peculiar problems of natural nitrate production in Chile as a cloak for their own interests. Such minor defects, however, do not obscure the solid and admirable quality of the work as a whole.

Cartels or Competition is a penetrating analysis of the relation between the environment and the growth of cartels and of the effects of cartels upon the economy. It presents two sets of policy recommendations—one by the authors and a longer and more detailed one by the Committe on Cartels and Monopoly appointed by the trustees of the Twentieth Century Fund, the members of which were James M. Landis, A. S. Goss, Marion Hedges, Donald M. Nelson, Jacob Viner, and J. Raymond Walsh. An appendix deals with the prevalence of cartels in the American economy.

The authors treat cartel activities as one manifestation of a trend away from competition toward nationalistic autarchy and business syndicalism in all industrial countries. The rôle of governments in fostering cartels and helping make them effective is emphasized. Nevertheless, the economic consequences of cartels are categorically condemned. While it is recognized that cartels sometimes improve technical efficiency when the cartelized firms stand to gain thereby, it is emphasized that cartels bolster the vested interests of high-cost producers, make prices rigid in a way which probably aggravates business instability, freeze conditions of over-expansion and promote under-investment, and practice price discrimination which destroys equal opportunity. The argument that cartels tend to stabilize an economic system is considered at length and discredited on grounds of both logic and experience. Instead, the authors conclude that cartel restrictions "strengthen the forces pushing toward retrenchment and aggravate the imbalance in the economic system." On the ground that cartels typically aim at preventing change, cartel arrangements are also rejected as means of coping with war-born maladjustments.

The authors recognize that particular cartels may serve the interests of particular nations in cases in which these nations sell the cartelized product to the world at large. But, considering this matter specifically in the case of Britain, they conclude that a nation cannot choose to have only those industries cartelized in which monopoly control would serve its own interests and that a comprehensive system of international restrictive controls would be contrary to the British interest.

Only in the case of raw materials do the authors see any justification for adoption of restrictive policies of the cartel type. The volatility of agri-

cultural prices and the erratic output of mining are regarded not only as problems for the populations whose income is derived from these industries but also as factors contributing to general instability. For this reason, the authors support governmentally sponsored commodity agreements organized on an international scale and designed to prevent fluctuations in agricultural income by such devices as buffer stock operations and to assure steady exploitation of mineral resources by incentive forms of differential pricing and by tax adjustments. They do not, however, discuss the degree of probability that commodity agreements will be used along the suggested lines for the suggested purposes instead of in other and more restrictive ways.

The authors recommend a policy designed to curb cartel restrictions, by international agreement, if possible, and by unilateral action on the part of the United States if necessary. They conceive such a policy as including not only direct attacks on restrictive practices, but also modification of patent laws to require the compulsory licensing of patents; development of government policies toward research designed to foster the exchange of technical information; national and international action to simplify corporate structures and to insure disclosure of the ownership and control of large corporations and the financial relations between them; reduction or abandonment of governmentally established barriers to international trade; and international coordination of national monetary policies.

The Twentieth Century Fund's Committee on Cartels and Monopoly likewise recommends a policy of breaking up cartels, coupled with concerted international action to reduce trade barriers, encourage international investment, and, if possible, check depressions. It regards the proposed charter of the International Trade Organization as an important, though not sufficient, step in making such a policy effective. It emphasizes the possibilities of unilateral action by the United States to supplement what is done through I.T.O. by a vigorous application of the American antitrust laws. To this end it proposes certain modifications of American law, most important of which is repeal of the Webb-Pomerene Act in favor of a substitute statute which would subject export associations to clearer and stricter rules. It recommends patent reform, international if possible and in any case domestic, and the continuation of efforts to dismember German and Japanese cartels through the activities of military government. It lends general support to the I.T.O. policy toward commodity agreements but proposes tightening the safeguards in certain respects.

This volume probably will become the authoritative analysis of the economic impact of international cartels. No previous American treatment of the subject has been so carefully reasoned and so well grounded in facts. Few recent works dealing with any aspect of market policy have shown comparable breadth of view, clarity of argument, and temperate balance of judgment. This reviewer's enthusiasm cannot be wholly due to the fact that on most points his own conclusions agree with those of the authors; for in chapters where this is not true, such as that which discusses commodity agreements, he finds the same virtues.

Such faults as the book possesses are subtle ones. The critique of cartels contained in this volume takes as its starting point an unrealistic assumption of relatively perfect competition as a practical alternative. An instance is page 279, in which a generally free market is said to reduce prices to the necessary costs of production and to provide a mechanism which allocates resources, organizes production, distributes income, and rations goods in a way which, though not perfect, is superior to any alternative which society has been willing to use. To rest the case against cartels upon the belief that competition has such virtues is to give cartels the status of a practicable alternative from the point of view of any one who finds competition unsatisfactory either for the economy as a whole or for some segment thereof. The sympathy which some socialists display for cartels rests upon this way of formulating the issue. Since the authors have made clear the inherently restrictive purposes and tactics of cartels, it should be sufficient for them to show that whatever imperfections competition may have can only be worsened by deliberate anti-productive maneuvers on behalf of group interests.

There is also in this volume something less than complete consistency as to methods of economic analysis. In certain passages, the authors treat the policies of cartels and cartel members as maneuvers for position in which profits on particular commodities in particular markets may be sacrificed to broad strategic considerations. At other points, the marginal analysis is applied with full acceptance of its implication that the motive of a trader is to maximize his profit on a particular commodity in a particular market. The disharmony between marginalism and the facts of life is, of course, not peculiar to this volume; and the authors have presented unusually rich material and valuable suggestive passages pointing toward the development of an alternative analysis of business positions and their economic significance.

CORWIN D. EDWARDS

Washington, D.C.

The Basing-Point System. By FRITZ MACHLUP. (Philadelphia: Blakiston. 1949. Pp. vii, 275. $5.00.)

Professor Machlup's new book on the basing-point system may be a disappointment to many in his wide circle of admirers among professional economists. Possibly, however, it will gain him new admirers in the wider audience to which it is also addressed. Present, as usual, are his pungent style, his sly humor, his gift for clear exposition of complicated matters, his masterful use of the analogy. The layman accustomed to dry and technical treatises from economists will find this a pleasant change.[1]

The author leaves no doubt that he is opposed to basing-point pricing. He attempts to prove that it is "monopolistic," in the sense of involving "collusion or oppression," and emphasizes what he calls "the peculiar interde-

[1] Despite an obvious effort toward simplifiied exposition, however, some technical terms—*e.g.*, marginal cost—creep in, without explanation, which may make the layman's perusal less happy than was indicated above.

pendence between the operation of the basing-point system and the domination of the industry by powerful concerns." In more detail, he argues that the system stifles competition, wastes transportation resources, results in higher prices and lower output than would prevail under f.o.b. mill selling, and causes mal-location both in the industry using the system and in industries using its product. A compulsory f.o.b. mill pricing system is endorsed as "the only practical alternative . . . in industries with heavy concentration of control."

In advocating, to a general audience, a definite position on a subject of current public controversy, an economist has to try very hard to refrain from slipping into the tactics of a debater. Professor Machlup has largely avoided this temptation. That he has definite views is clear. Yet only occasionally does persuasion possibly interfere with enlightenment. Once or twice, making opponents look ridiculous seems to take precedence over discovery of the truth. Conclusions are occasionally stated with what may be objectionable dogmatism and absence of appropriate qualification. Some may dislike the ways in which Machlup disposes of contrary views on the part of other economists. They are either not economists ("What can be so offensive and so appealing in a pricing method that economists would attack it vigorously while professors of marketing come forth to defend it?"); or they have been "paid witnesses" for "vested interests," and one wonders "how much of a bias is apt to creep into their thinking, in spite of their good intentions"; or they can be dismissed as spinners of abstract theories ("Almost anything can happen in this brave world. Economists have much imagination and succeeded in developing theories of a noncollusive development of the basing-point practice under oligopolistic conditions. . . . In a rather technical paper, Professor Smithies concluded, after complicated analysis . . .").

But the disappointment suggested in the opening sentence is not over such relatively trivial matters of presentation. It is more fundamental. To the professional student of price policies, the disappointment will be primarily that the book does not say a great deal that is new. There is neither new factual material, nor, more important, much really new, rigorous, theoretical analysis of major issues. As the author insists, the problem of the basing-point system is essentially a theoretical problem. From a master of pure theory, we might have expected some new abstract analysis at a high level of intellectual rigor.

There are, to be sure, some excellent pieces of exposition and analysis. Many controversial points are illuminated. There are other parts of the argument, however, that are less than completely convincing. In the approach to one of the most crucial problems, Professor Machlup's analysis is even deceptively non-rigorous. The systematic discussion of relative price levels under basing-point and f.o.b. pricing comes on pages 204-9. The following sentences represent, fairly, I think, the heart of the exposition:

> Assume that an industry is forced to switch suddenly from basing-point pricing to uniform f.o.b. mill pricing. Assume further that the level of mill net prices is to stay unchanged. In this case each mill will set its f.o.b. mill price at the figure of its previous average mill net price. . . .

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First, savings may be effected by using the cheapest means of transportation for shipments where alternative means [e.g., water] are available. This should reduce some delivered prices even if no orders are transferred from more distant to closer mills. But, secondly, there will be a tendency for consumers to place order with mills from which the freight cost is lowest. . . .

Up to this point, the benefits to consumers have all come out of savings in freight costs. . . .

When consumers in their attempts to save unnecessary freight costs transfer orders to closer mills, some producers may find their sales volumes shrinking so badly that they must start competing for more business. This, under the uniform f.o.b. mill price system, would take place chiefly through the lowering of their f.o.b. mill prices. . . .

For reasons explained earlier, producers faced with the necessity of competing for business will probably no longer have the inhibitions against lowering prices that they had under the basing-point system. In short, price competition will have come into play.

Note, now, the second and third sentences: "Assume further that . . . each mill will set its f.o.b. mill price at the figure of its previous average mill net price." Nothing that follows justifies nor removes this assumption.[2] Suppose, however, that we "assume" something else: namely, that each (base) mill makes its previous base price its new f.o.b. price. There is not space for a rigorous demonstration (which the reviewer believes can be supplied) that at least under certain assumptions the mill shifting to an f.o.b. system would set the same f.o.b. price as its previous base price. *In any case*, if we are merely to start by "assuming" something, this is no more ridiculous an assumption than Machlup's. But in this case, the level of delivered prices to consumers would *not* initially be lower.

To be sure, we still have the second reason for price reduction: competition for business by mills whose sales have declined. But, as Machlup himself admits, this is as good a reason for other mills (who have gained business) to raise prices, particularly if there is little unused capacity. Suppose, however, that the redistribution of business does result in an outbreak of price competition, because the mills that lose sales will seek to regain them and the mills that gain sales previously had unused capacity, and seek to hold their enlarged business. This is possible. But if the switch in pricing systems redistributes business (as it almost surely would), it is because the locational forces are different under the one than the other system. What might occur is some distress selling by badly located mills (*i.e.*, badly located under the

[2] The reader should be warned that Professor Machlup feels I have made an unjust error of interpretation here. He points out that the argument that changes in mill prices would arise from competition for business removes the initial assumpton of unchanged mill nets, which was made only for purposes of exposition. I do not believe I have been unfair. The quotation indicates his method, which is to start from an assumed price level and indicate forces operating to change it. Perhaps I could better have expressed my criticism by saying that this procedure seems a poor substitute for an *analytical* solution which would first identify "equilibrium" levels of price under each pricing arrangement, and then compare them. This Machlup never does.

new system). But if mills had "grown up" under f.o.b. pricing, or *after* locational readjustments following a shift in pricing method had occurred, *this* force in the direction of price competition would not exist. It is not inherent in the f.o.b. method of pricing.

Nevertheless, the nature and strength of competitive forces under the two systems are different, in ways that are subtle and hard to evaluate. The reviewer ventures the opinion that a realistic comparison of the price results under the two systems can be made only industry by industry, with careful regard for the many physical and institutional facts—such as, for example, the particular geographic configuration of markets, and the trends of demand in these markets. In the absence of such special consideration, it appears difficult to make dogmatic judgments as to relative price levels under f.o.b. and basing-point pricing.

But there is a third alternative, freight absorption without a basing-point system. Although Professor Machlup has little discussion of this possible arrangement, he admits that unsystematic freight absorption may be a powerful competitive force. Some, in fact, fear that ability to discriminate locally (coupled with imperfect knowledge) can lead to "ruinous" competition, in which delivered price in each local market gets reduced to the bare level of delivered marginal cost of the seller with the second-lowest delivered marginal cost in that market, and socially desirable investment retarded. Thus compulsory f.o.b. mill pricing might be the best thing that could happen from the standpoint of firms in some industries. If the only legal form of price competition required reducing all prices to reduce any, the impetus to price cutting might disappear completely; while the prohibition of freight absorption would remove any temptation to a costly form of non-price competition.

It seems possible that the strange and often confusing ambivalence of some basing-point defenders results from a perhaps unconscious switch in the comparison being made: (as compared with non-systematic discrimination) basing-point pricing provides stability against cut-throat price warfare—hence the system can be defended as a barrier against "ruinous" competition; but (as compared with compulsory f.o.b. pricing) prices would not be reduced if basing-point pricing were outlawed, because it is ridiculous to assume that oligopolists simply wearing new clothes would immediately become short-sighted enough to compete in price. Machlup's best point here, I think, is his emphasis upon the importance of domination by the big firms: the latter might not wish to compete under f.o.b. pricing, but their smaller competitors might, and ending of freight absorption would deprive the big firms of the opportunity for oppressive retaliation through the practice of intensive sales cultivation or price reductions in the local markets of small sellers who stray from the fold. But one may wonder whether other bases for oppression might not remain.[3]

[3] It is necessary, I think, to distinguish two purposes for oppression. One is to prevent small firms from upsetting the applecart by price cutting. Oppression may or may not be necessary to achieve this result—the small firms may be as far-sighted as the large, and their own profit prospects, "intelligently" viewed, may lead them to refrain from action

This brings us back again, then, to the issues of collusion and oppression, which Professor Machlup makes so central. There can be no doubt that overt collusion has often figured in basing-point pricing; some of its most absurdly wasteful results can only be so explained. Likewise, the existence of oppression is the only possible explanation of part of the history of base prices. But there remain the very large areas of questions as to the *meaning* of collusion and oppression when numbers are small and industries mature, and whether our legal tools are sharp enough to cut away collusion and oppression whatever the pricing system followed. Those who fail to join Professor Machlup's crusade against basing-point pricing perhaps do so basically because of doubts on this score.

Certainly, Professor Machlup has made some valuable contributions to the basing-point controversy; but he has not provided all of the answers, and we can be sure that the controversy will continue.

GARDNER ACKLEY

University of Michigan

Maintaining Competition: Requisites of a Governmental Policy. By CORWIN D. EDWARDS. (New York: McGraw-Hill. 1949. Pp. xi, 337. $3.75.)

The avowed purpose of this volume is to describe the content of a governmental policy designed to maintain "the competitive system" in the United States. The system thus to be preserved is simply one in which most markets, with the exception of natural monopolies, are primarily regulated by the active rivalry of the participant sellers and buyers. It is "simpler, cruder, and less comprehensively beneficial than the perfect competition of classical economics"; it admits of imperfect knowledge, confused motivation, product differentiation, selling efforts, and the recognized interdependence of rival firms. As such, this competition is not a sufficient automatic regulator of the economy, but it should be sought as one goal of a broader public policy aimed at maintaining a stable and prosperous economy.

The essence of this competition is found in "access by buyers and sellers to a substantial number of alternatives and in their ability to reject those which are relatively unsatisfactory." Its general structural requirements are: (1) an "appreciable" number of sellers and buyers for each general sort of good; (2) inability of any trader by virtue of size to coerce his rivals; (3) responsiveness of traders to profit-loss incentives; (4) no commercial agreements among sellers or buyers; (5) relatively easy entry to any market; and (6) no artificial barriers to buyer-seller relations and no artificial preferences to individual sellers or buyers.

The policy appropriate to the maintenance of such competition involves,

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that would ultimately leave all firms—large and small—in a worse position. The other situation involves possible conflicting interests between small and large firms. For example, maximization of profits by one (large) firm may require that other (smaller) firms at a distance remain non-base mills, or set higher base prices than is in their own interest to do. This can be achieved only by domination, because it involves a *transfer* of potential profits from one to the other.

first, an attack on undue concentration, collusion, and barriers to entry within the designated "competitive" areas, and second, a careful formulation of policy in the regulated non-competitive areas in order to avoid publicly sponsored private cartels and to secure reasonably competitive results under regulation.

With this general preamble, Mr. Edwards proceeds to examine various aspects of the problem at length, being mainly concerned with the detailed goals of a public policy toward competition and with detailed suggestions for legislative and administrative reform. He turns attention first to restrictive agreements among traders, which he holds to be generally undesirable regardless of allegedly beneficial intent. Explicit agreements should be directly attacked; tacit collusion should be undermined by attack on "supplementary collusive uniformities" such as detailed agreements on terms of sale, etc.; price leadership should yield at least in part to attack on coercive tactics and on undue disparities in size of firms. For these purposes, in spite of some unfortunate turns of interpretation, the substantive content of the existing antitrust laws is generally adequate, although codification of a list of specific practices which are generally regarded as objectionable would be helpful.

There are, however, numerous exemptions applicable to private agreements which should be removed or modified. Edwards argues that the Webb-Pomerene Act should be repealed, together with resale price maintenance legislation. The special exemptions allowed to agricultural cooperatives should be restricted by excluding from membership in exempt cooperatives all corporations and any persons not primarily engaged in growing crops. Co-operatives should be prohibited from coercive actions and attempts to monopolize, and the Agricultural Marketing Agreements Act should be repealed outright.

The author is less forthright, however, in the knotty case of labor. After considerable weighing of pros and cons, he limits himself to the proposal that the Apex-Hutcheson doctrine be modified by an act which would clearly distinguish commercial competition from labor relations and would make unions fully subject to the antitrust laws so far as their activities aim at control of commercial competition. The monopolistic activities of unions within the proper sphere of labor relations are left for treatment by special legislation and are considered "apart from the antitrust laws and even apart from the competitive policy."

The problems of concentration of market control and of economic power are found to occur with respect to simple horizontal monopoly, vertical integration, and overgrowth of the giant diversified firm. After examining the adverse consequences of such types of concentration, the author considers the complexities of the simple horizontal concentration within the single industry. He concludes that most of the real (as opposed to strictly pecuniary) economies of scale are ordinarily fully exploited within the single plant, that the arguments for real economies of scale to multi-plant firms are unsubstantial or overrated, and that there are many instances where such firms could be dissolved with economic advantage. For purposes of policy he would find the

number of firms unduly small (and thus seek dissolutions) "when the buyer no longer encounters substantial variations in business policy; whether —(this) is due to single control, to agreement, or to mutual forbearance among a few large enterprises"; he would also find a firm to be unduly large "when it habitually engages in acts of intimidation and coercion against [its rivals]." When either of these results is definitely threatened, similar intercession is recommended as a reasonable precaution. Objectionable vertical integration would be found first wherever a firm with a legal monopoly in one field enters another in which monopoly is unlawful (this should be forbidden); or wherever there is a substantial and not clearly justified disproportion in the sequence of a vertical integration which greatly disadvantages non-integrated competitors. Excessive firm size *per se* would be found where a firm "has coercive power or is habitually able to obtain discriminatory privilege."

For attainment of the policy goals thus implied, the author relies in part on "environmental changes." He would establish a federal incorporation for interstate firms and would limit the use of holding companies, interlocking ownership, intercorporate loans, and interlocking directorates, though to a not precisely specified degree. He would amend Section 7 of the Clayton Act to forbid all acquisitions of the stock of competing firms, without any test of results, and would add legislation limiting intercorporate acquisitions of capital assets under rules designed to check the growth of monopoly or great firm size. He would also favor legislation and taxation to preserve the impartiality of banks, discourage excessive reinvestment of earnings by large firms, and assist the growth of small enterprise.

With respect to direct attacks on existing concentration, however, he is less explicit. He does favor definite legislation affecting integration by legal monopolies, and would establish at law a rebuttable presumption that simple bigness in excess of some maximum size is against the public interest and hence illegal. But he is not too clear about the simple trust-busting job implied by any application of his standards of undue fewness in the single market. This reader received the impression that he stakes his main hope on a revision of judicial interpretations of the Sherman Act to accord with such standards.

For the balance of his policy, Edwards would direct attention to limiting coercive activities and to facilitating easy entry to markets. Various explicit proposals are advanced concerning discrimination (including some revisions of the Robinson-Patman law), tying contracts (requiring a strengthening of Section 3 of the Clayton Act), reciprocal buying, etc. Basing-point systems would be outlawed but sporadic freight absorption permitted. Limits would be placed on exclusive dealing arrangements, and modification of local licensing and regulatory laws which unduly restrict entry would be sought.

In an excellent brief treatment of the patent law problem (pp. 216-48), Edwards concludes that we should (1) secure a better procedure for scrutiny of patent applications and disclosure of the inventions patented; (2) require compulsory licensing where needed to safeguard against non-use or abuse

of patents; (3) require cross-licensing where patents are complementary; (4) make patent pools non-exclusive where the patents pooled are a source of substantial economic power; and (5) prohibit exclusive, discriminatory, and restrictive licensing in fields of use for a patent where the patentee does not operate.

After a number of warnings anent the scope and nature of controls in non-competitive regulated areas, the author turns to administration. Some of his major proposals here are (1) for the establishment of a "central competitive agency" charged with coordination and appraisal of the activities of semi-autonomous regulatory agencies and with recommending changes to them or to Congress; (2) for a quadrupled staff for the Federal Trade Commission and the Anti-Trust Division; (3) for various changes in law and procedure affecting consent decrees, penalties in civil suits, subpoena power in such actions, and rules of evidence in antitrust cases; and (4) provision of a rule-making power for the antitrust agencies. His analysis of the administrative and litigatory problems which underlie these proposals is good.

Taken as a whole, the work presents a well-balanced and comprehensive program for the preservation or rejuvenation of a workable free enterprise economy in the United States. Its principal contribution perhaps lies in the elaboration of an array of legislative changes and innovations consistent with the vigorous pursuit of the American antitrust policy and philosophy, and in the testing of each suggestion in the light of empirical limitations and economic logic. Its weaknesses are those generally intrinsic in efforts of this sort. It does not demonstrate nor adequately analyze the extent to which market behavior would be altered by the implementation of its various proposals. It points to aspects of economic structure or behavior which seems adverse to good over-all performance, and rests on the assertion that if these were remedied things would be somewhat better. The standards of desirable structure and behavior are at crucial points vaguely defined, with heavy reliance upon terms such as "substantial variations in business policy," "appreciable" number of sellers, "coercive power," etc. We could better assess the potential merit of Edward's policy if we knew more exactly what these terms mean to him or would mean in practice, and if we could thus guess at the sort of economic behavior which would emerge from market situations which met his standards. The labor issue is rather casually passed over, although it seems integral to the general problem attacked, and the embarrassing issues of tacit collusion and price leadership are viewed hopefully but certainly not resolved. Nevertheless, Edwards has put forward a systematic program for experiment which is well worth further analysis and evaluation.

JOE S. BAIN

Berkeley, California

Pricing of Military Procurements. By JOHN PERRY MILLER. (New Haven: Yale University Press. London: Geoffrey Cumberlege. 1949. Pp. xiv, 292. $4.00.)

This book is an excellent summary and appraisal of the economic signifi-

cance of military procurement policies before 1939 and during World War II. It concludes with recommendations as to procurement policy in a society at peace but with large military expenditures continuing. The book is well written, the points made are clearly stated, and the author makes explicit the point of view from which his analysis stems. A final chapter presents the opinions of a conference on pricing military procurement which critically reviewed an earlier draft of Miller's book.

The emphasis throughout is on pricing. While recognizing that the overriding purpose of military procurement is to secure necessary military supplies, it is contended, nevertheless, that this can be done more effectively by determining prices which places upon the supplying contractor some impelling reason for conserving labor and materials. Underlying this general desire to use the price system to promote efficiency along the lines of Cassel's "Economic Principle" there is the desire to "preserve our democratic institutions, individual initiative, and the decentralization of decision-making" (p. 16.).

In times of peace but large military expenditures (crisis times), it is recognized that the competitive price system must be buttressed with fiscal and monetary policies which "avoid chronic tendencies toward unemployment on the one hand and inflation on the other" (p. 9). War will, of necessity, bring other controls including specific price controls, priorities, limitation orders and allocations. These may aid in proper pricing of military procurement in wartime but will not dispense with it. The pricing of military items, it is argued, should generally be left to the military services. Even in wartime the author believes that monetary and fiscal policies can accomplish much and thus make less imperative the detailed regulation of prices.

Negotiated contracts rather than competitive bidding is recommended as the best device for setting prices which will relieve contractors of those risks over which they have no control, while at the same time allowing them to bear risks which they may reduce by good management and efficiency. The incentive for such improvement is the added profit which good management brings. The control of raw material prices and of wages may aid this process by reducing the risk factors which are beyond the control of the contractor. Other devices, such as accelerated depreciation, government constructed facilities and government purchased equipment and special materials are all recognized as having merit for this same reason. Renegotiation of profits, while having morale-building advantages, has some considerable disadvantages, since the efficient producer who has reduced cost may be allowed no more, and perhaps less, profit than the inefficient who have raised costs. It also creates the tendency to think of close pricing as less important because profits are controlled.

The author clearly indicates that the negotiated contract is not a simple formula. It is a way of constructing contractual terms which, if based on sound information, can meet the various purposes of the military services and, at the same time, take into account different problems of the suppliers. Trained personnel are essential as is a general spirit of cooperation for a "fair deal." It also requires that purchasing and specification drawing be more closely integrated.

This reviewer is firmly convinced that the "formal bid" procedure is almost worthless under present industrial practices. That an intelligently negotiated contract is superior seems evident to him. But in wartime the intelligent and well-informed negotiation of close price terms is difficult and perhaps impossible in many instances. It is, however, about the only method that is at all workable so long as the contractual program must be carried forward in terms of a purchase and sale for a price. The effectiveness of price in promoting economy of resources is extremely difficult to prove. The mass of accounting data may, in many instances, not really reach to the root of the real cost which should be reduced. The advantage of securing the contractors help in being economical is desirable, but how effectively this can be done through close pricing, particularly in war time, is questionable. Miller's conclusion (p. 221) that the World War II "evidence of the over-all effectiveness of the services' pricing policies and procedures is not conclusive" would be further emphasized by the reviewer. The fact that we won the war, that we carried through the greatest procurement of any military enterprise in world history or that "once conversion to war production had been effected prices negotiated on military contracts became increasingly reasonable" (p. 221), are not pertinent to the special point of economical use of resources through pricing.

That what can be done by this method should be done, is certainly obvious; that it may be considerable in peacetime, given intelligent and honest personnel, is probably true; but in wartime, when under great pressure to make every resource count, other more positively effective devices will be required irrespective of their authoritarian character.

RAYMOND T. BOWMAN

University of Pennsylvania

Land Economics; Agricultural Economics; Economic Geography

Urban Land Economics. By RICHARD U. RATCLIFF. (New York: McGraw-Hill. 1949. Pp. xii, 533. $5.50.)

To the reviewer's knowledge, Ratcliff's work is the first text on *urban* land economics since 1928 when the real estate boom of the 'twenties was on the wane. In the interval, profound changes have occurred in urban land use and public attitudes toward land use problems, and some progress has perhaps been made in our understanding of land use phenomena. In the interval, too, texts on principles of urban real estate have covered much of the ground usually encompassed in urban land economics, but neither subject matter nor analytical treatment was quite commensurate with the requirements for a text on urban land economics. On the other hand, texts on general land economics devote most of the space to non-urban land uses.

Thus, the appearance of the first text within twenty years would, of itself, command unusual interest. This interest is heightened by Ratcliff's systematic and comprehensive approach to the subject and by a presentation reflecting the author's experience in applied research as well as in teaching. A great deal of empirical material brought together under one cover should increase the usefulness of the book for classroom purposes. Unquestionably, this is the

most inclusive and advanced text on the subject, and one that reflects the vast changes in this field during the past two decades.

After an introductory chapter on the institutional aspects of real property, Ratcliff devotes two chapters to the city as an economic and social complex and a chapter each to the demand for housing and for non-residential space. The supply side is covered by four chapters on the construction industry, the building process, and financing, including the federal financing aids. The interactions of demand and supply are treated in two chapters on urban land market functions and organization and on the housing market. Land income and value as well as city growth and structure are analyzed as products of land market forces. The final three chapters are given over to a brief discussion of urban land policies generally and a more detailed discussion of housing policies. Thus, the text in sixteen chapters covers a broad range of subjects held together by the author's focus on the market concept.

Into this framework Ratcliff has been able to inject additive materials, such as his detailed observations on the so-called filtering process in housing and on retail locations. His dispassionate discussion of current housing problems and policies, comprising about 100 pages, is not only useful but refreshing at a time when the issues are beclouded by emotional approaches and *ex parte* statements.

In the selection and organization of subject matter as well as in the analytical treatment, Ratcliff's text is a significant reflection of the present "state of the arts" of urban land economics. By the same token, the book raises questions directed toward the contents of the discipline rather than toward Ratcliff's truly substantial contribution. Urban land economics has as yet to define its field. Attempts to treat within a general framework the admittedly topical housing problems, construction economics, real-estate financing, city growth, and the theories of land value and urban locations are always in danger of doing justice to only a few of the subjects (even in a 524-page text such as Ratcliff's). Concentration on a more limited range of subjects would probably advance progress in a discipline which the author himself characterizes as "immature." For example, Ratcliff, in Chapter 13 on "City Growth and Structure," highlights two basic problems of urban land use: the relationship of land use to the site and the evaluation of space relationships. These two problems would bear much more extensive and penetrating analysis than is possible in an all-embracing framework of urban land economics.

Urban land economics is as yet preoccupied with descriptive materials and institutional analysis, which tends to obscure such principles of urban land economics as may be developed, and makes it difficult for the student to identify the theoretical structure. The linkage between general economic theory and principles of urban land use is yet to be more fully established. It is perhaps characteristic that even Ratcliff, who is more conscious of the need for a theory of urban land use than most writers in this field, and more successful in developing it, devotes twice as much space to the administration of real estate taxes as to the incidence of taxation.

Since urban land economics finds it difficult to delimit the field and

emphas. .s descriptive analysis, the materials furnished to the student more often than not lack balance. As an illustration, 21 pages each of the present text are devoted to central issues in urban land economics such as land values and market functions; in contrast, 73 pages deal with credit and financing and 170 pages with various aspects of housing and housing policies.

Urban land economics has as yet to resolve the difficulty of focusing on the market concept while recognizing the importance of non-economic determinants of land use phenomena. The author shows full awareness of this problem but, when the chips are down, falls nevertheless into simple economic determinism, as in the statement that the city structure "is determined through the dollar evaluation of the importance of convenience" (p. 375).

Let it be said again that these comments do not detract from the real value of this text. It is because of the representativeness of Ratcliff's approach and its generally high quality that his book raises questions as to the orientation of urban land economics as a discipline.

Leo Grebler

Institute for Urban Land Use
and Housing Studies,
Columbia University

Labor

Partners in Production—A Basis for Labor-Management Understanding. By the Labor Committee of the Twentieth Century Fund, assisted by Osgood Nichols. (New York: The Twentieth Century Fund. 1949. Pp. ix, 149. $1.50.)

This small volume is the sixth of the series of reports by the Labor Committee of the Twentieth Century Fund. The volume, according to its foreword, formulates ". . . a new philosophy of labor-management relations on which both labor and management could agree." The present membership of the committee consists of Chairman W. H. Davis and Messrs. J. A. Brownlow, W. L. Chenery, H. Coonley, H. W. Payne, S. H. Slichter, H. W. Steinkraus, and E. E. Witte.

Chapter 1 poses the problem of conflict or cooperation in labor-management relations. The committee finds some evidence that cooperation is growing in the small percentage of working time lost in strikes (even in 1946), in a decline in bitterness in strikes (because employers did not attempt to operate), and in a shift in attitude as union organizers have been replaced by administrators and as employer belligerency has waned. The contention is also supported, they believe, by the observations (1) that few employers have taken advantage of the Taft-Hartley Act and (2) that events have discredited the Marxian concept of class struggle.

The second chapter, "The Goals and Attitudes of Labor and Management," constituting nearly one-half the book, is a useful introduction to much of the literature on worker and management motives. It consists of a

commentary woven around judicious quotations from or references to the writings of such students as Herberg, Bakke, Ross, Roper, Shister, Reynolds, Whitehead, Roethlisberger and Dickson, Williams, Mathewson, Tannenbaum, Harbison and Dubin, Drucker, Chamberlain, and others.

In Chapter 3, the goals of labor and management are classified and evaluated under three headings: mutual goals, seeming conflict, and real conflict. A mutual goal is involved in the worker's desire for advancement. This can be met by a secure union if it gives up strict seniority in promotions. Seeming conflict is involved in such issues as the introduction of technological changes and the problem of managerial prerogatives. To the latter issue the following possible solution is advanced (pp. 107-8): (1) Let the content of policies be a proper matter for bargaining; (2) Let the administration of the jointly accepted policies be management's responsibility, subject to (3) the union's freedom to invoke the grievance procedure. Thus the committee, in common with many other observers, rejects the idea of blocking out a proper subject matter for collective bargaining. To the committee, unions generally do not want to take over the job of management.

Real conflict is involved between labor's desire for security and management's desire for profits. Potential compromises include full acceptance of the union, stabilizing employment, severance pay, pensions, and evoking the will to work.

The "new philosophy" toward which the report is pointing is actually the old solution of "industrial democracy," some aspects of which have been described earlier by such writers as the Webbs, Slichter (industrial jurisprudence and union-management cooperation) and Bakke (mutual survival). The philosophy is not expressed here precisely as indicated by the following two quotations of different import and emphasis:

> A contribution can be made toward the solution of the problem of the age—the relationship between people—by letting the citizens of the nation's shops govern themselves; that is, to the extent that it is practicable and they are ready and able (p. 131).
>
> The Committee therefore recommends: That in all plants in which there is union representation management and organized labor assume responsibility for the integretation of the union into the plant organization as an effective channel of two-way communication from managers to workers and from workers to managers (p. 147).

The implications of labor "participation in exchange for responsibility" are not spelled out. In this connection Professor Slichter's examination of the reasons for the failure of some union-management cooperation plans is relevant. Also comparison with the Catholic, socialist or communist plans advocated by some union leaders would be desirable in order to indicate that industrial democracy is a means to different ends.

The above paragraph implies that, like its predecessor, *Trends in Collective Bargaining*, this book is somewhat mistitled. It is by no means a comprehensive discussion of the problems of partnership in production. The goal is stated,

but the decision to use the slick-magazine style and level of writing apparently inhibited the analysis of it. In the reviewer's opinion, development in greater detail of the ideas advanced in the last two chapters would prove more convincing to labor and business leaders.

F. S. Doody

Boston University, College of Business Administration

Labor in Postwar America. Edited by Colston E. Warne and Associates. (Brooklyn: Remsen Press. 1949. Pp. xii, 765. $10.)

This is a successor volume to *War Labor Policies* (Volume 1, *Yearbook of American Labor*), published in 1945. The two volumes are essentially similar in organization and treatment, though several of the editors and about two-thirds of the contributors have changed. Such differences as exist are due primarily to the shift from a wartime to a peacetime economy, with the attendant relinquishment of governmental controls over wage, price, and manpower policy, and the corresponding growth in scope and importance of collective bargaining. Sections on labor and the government, wartime union policies, and international relations of labor have been dropped, and a section added dealing with developments in labor legislation. Similarly, changes have been made in the specific topics included in some of the sections. Thus the list of key industries surveyed has been expanded to include a number not vital in war but significant in the peacetime economy, and chapters have been added on industrial relations in occupied Germany and Japan.

The thirty-one contributions that comprise the present volume, except for the concluding chapter, are grouped under five main headings: postwar setting, changes in American labor conditions, developments in labor legislation, labor relations in key industries, and labor relations of special groups. In addition, there are several appendices, including a chronology of the stabilization program after VJ-Day, a detailed analysis of the counter-march in labor legislation, and a roster of American labor unions.

An enormous mass of information dealing with virtually all important aspects of labor relations in the immediate postwar years is analyzed, organized, and presented in usable form by the thirty-five specialists whose contributions make up the volume. Some of them, holding governmental research or administrative posts, report developments in the areas with which they are officially concerned. The bulk of the contributions, however, come from academic economists rather than government officials, reversing the distribution of authors in the earlier volume. Though this should permit much more in the way of critical analysis, the emphasis in the volume is on straightforward factual presentation. Indeed, with three dozen contributors and editors, any other treatment would have created fresh difficulties, and impaired the volume's usefulness as a reference manual.

The structure of the volume makes for some overlapping. With separate chapters, for example, on Supreme Court labor decisions and on industrial

relations in coal, inevitably there is some repetition, for certain leading cases must be treated in both chapters. Similarly, different authors cannot write on such closely related topics as decontrol of wages and prices, basic labor conditions, and urban price trends without touching on similar developments. By the time the reader comes to the detailed story of industrial relations in pace-setting industries such as coal, steel, or automobiles, he has been made familiar by earlier chapters with many of the important issues, now to be presented in a different context or from a somewhat different point of view.

This is not a book designed to be read through; it is too choppy for that, since it lacks a story that flows though the volume. Rather each chapter is a unit in itself, telling a complete story of its segment of the vast and complicated postwar labor drama. The grouping of topics lends order and some cohesiveness to the volume, and a concluding chapter by Dorothy W. Douglas, "A Balance Sheet for Labor," pulls together some of the strands and gives some appraisal of significant postwar trends. Students will find the volume most helpful as a quick reference manual for labor developments following the war, and teachers will find many of the chapters useful as supplementary readings.

Where a volume is made up of so many separate contributions, all of them competently and many of them unusually well done, it is difficult for the reviewer to single out some for special attention without being unfair to the remainder. Any selection made may be a better index to the interests of the reviewer than to the quality of the contributions. Nevertheless, if this reviewer were to mention any single contribution, it would be the detailed analysis of the conservative swing in federal and state labor legislation prepared by David Ziskind. Emily Clark Brown is among the others who make very able contributions to the volume.

Colston Warne and his associates have done their job in a competent and scholarly manner. Their comprehensive survey of postwar labor developments should serve as a valuable reference source for many years to come.

Joel Seidman

University of Chicago

Labor in Norway. By Walter Galenson. (Cambridge: Harvard University Press. 1949. Pp. xiv, 373. $5.00.)

"Few books have explored the institutions and the policies of a country in their bearing on industrial relations and the role of labor in the community with such insight and thoroughness as Dr. Galenson's *Labor in Norway*." Being in complete agreement with this introduction to the foreword by Professor Sumner H. Slichter, I may as a Norwegian add that "few books" may well be substituted by "no book" if "a country" is substituted by "Norway."

Dr. Galenson who is assistant professor of economics at Harvard University, conceived this study while he was serving as labor attaché to the American Embassy in Oslo during 1945 and 1946. This work brought him into

intimate contact with Norwegian experts on industrial relations and with influential individuals within the Norwegian government, The Employers' Association, the Trade Unions, and the political parties. The author utilized this opportunity remarkably well. He has succeeded not only in giving a correct and thorough discription of Norwegian institutions and policy; but he has also clarified in an excellent way the major problems which the Norwegian labor movement is confronted with today.

The opening chapters of Dr. Galenson's book deal with the history and structure of the labor movement and the employers' organization. Among other things he points out that the Norwegian trade unions are considerably more centralized than the American and that during several decades they have supported the Labor Party which in 1945 gained the majority of the Norwegian Parliament (Stortinget). A corresponding unlikeness on the employers' side is the willingness of Norwegian employers to delegate the handling of labor relations to specialists of the Employers' Association.

Next are considered the Norwegian attempts to mitigate the effects of industrial strife through legislation, and also the history and results of the industrial relations process. Of particular interest is Dr. Galenson's discussion of the Norwegian experiment with mediation combined with a "cooling off" period, and of the distinction between "disputes over right" which are handled through a Labor Court and "disputes over interests," which are handled differently. Furthermore, a thorough analysis is made of the intricate pattern of industrial labor practices that have been embodied in the written collective agreements governing conditions of work for most Norwegian employees.

The remaining one-third of the book, dealing with the impact of a labor government upon the labor market, is introduced by a concentrated and well-balanced description of postwar Norwegian economic control and planning. The ensuing chapters dealing with postwar labor legislation and wage determination, and with the problems of trade unions under a labor government, present a most interesting analysis of labor against the background of the general economy and economic policy. Dr. Galenson has correctly pointed out that the achievement of political power by labor has implied a fundamental change in the essence, if not in the form of employer-employee relations. The trade union's bargaining power has increased greatly, and the trade unions have attained an important influence on economic policy in general. This increased responsibility has resulted in a changed attitude toward the strike weapon, toward scientific management, toward wage incentive plans, etc., a change which is still going on. The reviewer agrees with Professor Sumner H. Slichter in his statement that "The most important part of the book is Dr. Galenson's penetrating discussion of the effect of power upon trade unions and the labor party."

Not only those who are interested in industrial relations but anyone with interest in problems of economic policy may read this book with profit and enjoy it.

PETTER JAKOB BJERVE

Central Bureau of Statistics, Oslo

Population; Social Welfare and Living Standards

Readings in Social Security. By WILLIAM HABER and WILBUR J. COHEN. (New York: Prentice-Hall. 1948. Pp. xix, 634. $5.75.)

Much of the most worthwhile literature relating to social security philosophy and practice has existed only in scattered and fragmentary form—technical articles, speeches, Congressional hearings and governmental reports, some of which have never been generally available. Not only has some of the most stimulating thinking in the social security field thus been lost to the teacher, student, and administrator, but there also has been no one book or even group of books which a student could peruse with reasonable certainty of covering all of the more significant viewpoints.

In this collection of writings on all phases of social security, Messrs. Haber and Cohen have done much to provide a remedy. The broad scope of the book's subject matter is amply demonstrated by the chapter headings: The Problem of Insecurity; Theory and Philosophy of Social Security; Social Security Developments in the United States; Economic and Financial Aspects of Social Security; and Appraisal and Criticism as well as chapters devoted to each of the major social security programs. The general introduction is provocative, and each chapter is prefaced by a brief editorial statement providing background and perspective. The value of the book is amplified by the presentation of a list of selected references at the end of each topical chapter, by generally adequate indexing, and by a pleasing format.

No point is served by attempting here to evaluate either the appropriateness of the specific selections or the thinking of the authors represented in the collection. The editors have attempted with apparent success to present a balanced and suggestive collection including, in their own words, "the important opinions which bring out the major lines of reasoning—good, bad, and indifferent—from which the reader can develop his own point of view." While the editors' stature in the social security area would amply justify a liberal inclusion of their own views, they have not taken advantage of the opportunity.

As economists, we may be surprised that only four of the 65 selections are presented under the heading, "Economic and Financial Aspects of Social Security." With one exception, these consist of writings (by Sumner Slichter, Eveline Burns, and J. Douglas Brown) which appeared in the March, 1940 Supplement to this *Review*. The more up-to-date selection, written by Eliot Swan in 1946 as part of the Federal Reserve System's series of postwar economic studies, presents an especially helpful summary analysis of social insurance financing problems with emphasis upon their fiscal policy aspects.

Naturally, the economist will also find much to interest him in other parts of the book. But this is clearly not the place to look for a systematic treatment of social security in the framework, for instance, of national income analysis or in the context of any of the appropriate branches of economic theory.

To some extent the scarcity of such material which would be helpful to the

student of economics reflects inadequacy in the literature as well as a deliberately different purpose on the part of the editors. In general, the selections were undoubtedly designed to discuss the social security program in all its aspects—philosophical, administrative, legal, social, and political, as well as economic.

The collection is of more than historic and reference interest. The statements presented on medical care insurance, for instance, will be most useful as a source of relatively dispassionate arguments pro and con. The inclusion of important conclusions of the Senate Advisory Council on Social Security (1948) adds materially to the collection's immediate usefulness. And an article prepared by the present Social Security Administrator on the relationship of private health and welfare plans to the basic social security system is likely to be of interest in connection with recurrent labor-management negotiations on this subject.

One might wish for the inclusion of more material on foreign social security thinking, on the "social security" which is provided exclusively for war veterans, on the economics of transfer payments in general; and perhaps for the inclusion of texts (or digests) of pertinent legislation. Nevertheless, the significant lines of thinking are represented in the book. And in the continued absence of a new and authoritative textbook on social security, this volume is apt to prove much more useful than the ordinary collection of collateral readings.

D. E. CHRISTIAN

Washington, D.C.

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NOTES

The annual meeting of the American Economic Association will be held at the Commodore Hotel, in New York City, December 27-30, 1949. A preliminary program was announced in the September number and a more complete program has been sent to all members with a ballot for the election of officers for the coming year.

Editorial Note on Bibliography

In preparing the bibliography for the Periodicals department of the *Review*, there always exists an insoluble problem of where to draw the line. For domestic publications the problem is not particularly serious. The listings are mainly from the technical journals of economics and other social sciences, but also include many gleaned, not too systematically, from other sources. Editorial efforts are now being made to reduce the latter to more systematic coverage, drawing the line against the too ephemeral and those too far on the fringe of economists' interest.

The case of foreign listings, however, is more baffling. After the war, without any particular plan, more and more listings were gradually made from the renascent economic and related journals, even those in the less well-known languages, and from the numerous Latin American journals. This produced a large number of entries either of dubious value or accessible to only a few readers.

We have come to the conclusion that the *Review* could without serious disadvantage to its readers cut down rather sharply on entries from these sources, and in particular from journals in the more esoteric languages. This policy is based in large part upon the valuable service being rendered by the *Economic Journal* (London) in publishing the table of contents of most of the European and some other foreign language economic journals. We assume that most American scholars interested in economic articles published in Scandinavian, Dutch, Polish, Czech and other journals have access to the *Economic Journal* and can secure their bibliographical guidance from that source. The addresses of most of the journals can be found in the 1948 *Handbook* of the American Economic Association, beginning at page 337.

The *Review* will continue its comprehensive listing of articles in the English-language journals and a somewhat more selective listing from journals in the more widely known European languages.

While speaking of bibliography, a word may be said about the Titles of New Books department of the *Review*. A rather extensive inquiry was made among readers of the *Review* to find out whether we might not save space by listing fewer relatively ephemeral or unimportant items, especially in the pamphlet field. It appeared, however, that many specialists desired to have such material called to their attention. The policy in this respect will therefore remain unchanged.

Opportunities for Study, Research and Teaching Abroad

Numerous opportunities to do graduate work or advanced research, or to serve as visiting professors, are offered to American economists under the Fulbright Act.

Graduate students interested in the possibilities for study should make application to the Fulbright Program adviser at their university or, if not currently enrolled, to the Institute of International Education, 2 West Forty-fifth Street, New York 19, N.Y.

Persons interested in the opportunities for visiting professors and research scholars should write to the Conference Board of Associated Research Councils, 2101 Constitution Avenue, Washington 25, D.C.

Establishment of Joint Committee on Southern Asia

The American Council of Learned Societies and the Social Science Research Council have established a Joint Committee on Southern Asia for the purpose of appraising

American studies relating to India, Pakistan and Southeast Asia and making plans for their further development. Those interested in the work of the committee should communicate with Miss Alice Thorner, Executive Secretary, Box 17, Bennett Hall, University of Pennsylvania, Philadelphia 4, Pennsylvania.

An Institute of Social and Economic Research has been established at University College of the West Indies, Jamaica, West Indies. The director is Mr. H. D. Huggins.

Deaths

Benjamin M. Anderson, January 19, 1949.
Frank D. Graham, September 24, 1949.

Appointments and Resignations

Carl E. Abner has been appointed instructor in economics at the University of Louisville.

Robert J. Agnew has been appointed instructor in the industry department, School of Business Administration, University of Pittsburgh.

Norman Albrecht has been appointed graduate instructor in economics at Tufts College.

Sidney S. Alexander has resigned as assistant professor of economics at Harvard University to take a position with the International Monetary Fund.

Graydon K. Anderson, of the University of Wisconsin, has been appointed assistant professor of economics at San Diego State College.

Ivar Axelson has been named lecturer in marketing at the University of Miami.

Joe S. Bain, Jr., has been promoted to professor of economics at the University of California, Berkeley.

Ralph L. Baker has been promoted to an associate professorship in the department of economics and sociology at Iowa State College.

Robert Banzhaf has been appointed instructor in economics and commerce at the University of Chattanooga.

Robert A. Battis has been appointed instructor in economics at Lafayette College.

F. N. Beard has been appointed assistant professor of accounting in the department of political economy at the University of Toronto.

William N. Bergstrom has been promoted to the rank of associate professor of accounting in the College of Business Administration, Marquette University.

Robert E. Bickner is an instructor in the College of Business Administration, University of Georgia.

Warren J. Bilkey has been appointed instructor in economics at the University of Connecticut.

Leonard J. Bisbing has been appointed associate professor and chairman of the department of marketing, and director of the Bureau of Economic and Business Research in the College of Business Administration, Marquette University.

Martin L. Black is on leave from Duke University to work with the Atomic Energy Commission.

Jacob J. Blair, formerly staff arbitrator for the U. S. Conciliation Service, has been appointed professor of economics in the School of Business Administration, University of Pittsburgh.

Roy G. Blakey has been appointed visiting professor of economics at the University of California at Los Angeles for the current year.

Fred Blum has been appointed lecturer in economics for the fall term at Michigan State College.

George D. Bodenhorn has been appointed lecturer in economics at the University of California at Los Angeles.

S. Lees Booth has been appointed instructor in economics at Lafayette College.

Richard M. Bourne has been promoted from instructor to assistant professor of economics and labor relations in the College of Business Administration, University of Nebraska.

Royal Brandis has been appointed instructor in economics at Duke University.

Jack Bright has been appointed instructor in accounting at Illinois Institute of Technology, Chicago.

Royal J. Briggs has resigned as professor of economics at Central Missouri State College to accept a post at Superior State College, Superior, Wisconsin.

Henry D. Brohm, of the University of Illinois, has been appointed associate professor of marketing at the University of Florida.

O. L. Brough has been appointed professor of economics at Iowa State College.

Yale Brozen has returned to Northwestern University after a six months' leave of absence, during which he served as consultant for the Social Science Research Council's Committee on Social Implications of Atomic Energy and Technological Change.

Edward C. Budd has been appointed assistant professor of economics in the College of Commerce and Business Administration, University of Illinois.

M. M. Bronfenbrenner is on leave from the University of Wisconsin to do tax research work for the United States Army in Japan.

R. L. Bunting has been appointed assistant professor of economics at the University of North Carolina.

Daniel W. Burch is agricultural economist in the tax section of the Bureau of Agricultural Economics.

John F. Burke has been promoted from associate professor to professor of accounting at the University of Georgia.

John A. Buttrick, formerly of Yale University, has joined the staff of Northwestern University as an instructor in the department of economics.

Leonard F. Cain has been appointed instructor in economics in the Graduate School of Social Science, The Catholic University of America.

Francis J. Calkins has been promoted to the rank of professor and chairman of the department of finance in the College of Business Administration, Marquette University.

Carl E. Calohan, of the University of Alabama, has been appointed instructor in economics at the University of Florida.

James J. Carney, Jr., has been named chairman of the department of finance at the University of Miami.

Robert Campbell has been appointed assistant professor of economics in the College of Commerce and Business Administration, University of Illinois.

W. M. Capron has been appointed assistant professor of economics in the College of Commerce and Business Administration, University of Illinois.

Leonard Chadwick, of the University of Nevada, has been appointed assistant professor of economics at San Diego State College.

W. E. Chalmers has been promoted to professor of economics and has been appointed acting head of the Institute of Labor and Industrial Relations, University of Illinois.

Neil W. Chamberlain has been promoted to the rank of associate professor of economics at Yale University.

Lester V. Chandler, of Amherst College, served during the summer as staff economist for the Subcommittee on Monetary, Credit and Fiscal Policies of the Joint Committee on the Economic Report and is continuing in that capacity on a part-time basis this year.

Robert F. Clark has retired from the Marietta College faculty, where he has been professor of economics and sociology since 1922.

Robert L. Clodius was appointed lecturer in economics for the fall term at the University of California, Berkeley.

J. A. Cochran has been appointed assistant professor of economics in the College of Commerce and Business Administration, University of Illinois.

Frank G. Coolsen has been appointed assistant professor in the College of Commerce, University of Kentucky.

William Corson has been named instructor in economics at the University of Miami.

C. Merle Crawford, formerly of the University of Illinois, has been appointed instructor in marketing at the University of Florida.

Richard M. Cyert has been promoted to assistant professor of economics at Carnegie Institute of Technology.

Amando M. Dalisay has recently been appointed director of the department of economics, research and statistics, Philippine National Bank, Manila.

K. R. Davis has been appointed assistant professor of marketing at the University of North Carolina.

Harris P. Dawson, Jr., of the Bureau of Labor Statistics, is serving as staff economist for the Subcommittee on Unemployment of the Joint Committee on the Economic Report.

Ray Dawson has been appointed instructor in accounting at Illinois Institute of Technology, Chicago.

William G. Dick has been appointed instructor in economics in the College of Business Administration of the University of Nebraska.

Robert L. Dickens has been appointed instructor in economics at Duke University.

Paul A. Dodd is on leave from the University of California for research work in Europe.

Francis S. Doody has been promoted from assistant professor to associate professor of economics at Boston University.

James H. Dornburg has joined the staff of the School of Business Administration, Emory University, as instructor in economics.

Laurence P. Dowd has been appointed instructor in economics at the University of Michigan.

Douglas D. Drysdale is instructor in money and banking at the University of Virginia.

Doris A. Duffy, of the College of the Sacred Heart, Manhattanville, N.Y., has joined the faculty of the Graduate School of Social Science, The Catholic University of America, as assistant professor of economics.

Durward H. Dyche has resigned from the University of Texas to accept an appointment as associate professor of law at Wake Forest College.

William R. Dymond, of Cornell University, has joined the staff of the department of economics at Massachusetts University.

Harry Eastman has been appointed instructor in economics at Duke University.

Thomas J. Edwards has been appointed instructor in accounting at Louisiana State University.

Wilford J. Eiteman has been promoted to the rank of professor of finance in the School of Business Administration of the University of Michigan.

Grover W. Ensley, formerly administrative assistant to Senator Ralph E. Flanders of Vermont, has been appointed to the staff of the Joint Committee on the Economic Report as associate director.

Guy P. Evans has been appointed lecturer in accounting in the Graduate School of Social Science, The Catholic University of America.

Elmer D. Fagan is on sabbatical leave of absence from the department of economics of Stanford University in the current academic year.

Hans R. Fadum has been promoted to the rank of assistant professor of economics at Yale University.

William W. Frasure has been promoted from assistant professor to associate professor of accounting in the School of Business Administration, University of Pittsburgh.

Robert W. French has resigned from the University of Texas to become dean of the College of Commerce and Business Administration at Tulane University.

Walter Froehlich has been promoted to the rank of professor of economics in the College of Business Administration, Marquette University.

Joseph Fulton, of New York University, has been appointed instructor in economics at Michigan State College.

George Garvy, of the Federal Reserve Bank of New York, has been appointed lecturer in economics at Columbia University School of General Studies.

Jack E. Gelfand, formerly of Washington Square College of New York University, has accepted an assignment as instructor in economics in the School of Business Administration, Lehigh University.

Thomas G. Gies is an instructor in economics at the University of Michigan.

Bela Gold has been promoted from assistant professor to associate professor of economics, School of Business Administration, University of Pittsburgh.

George S. Goodell has been appointed instructor in business administration at Marquette University.

James Goosman is an instructor in business administration at Louisiana State University.

Blaine M. Gordon has been promoted to the rank of assistant professor of economics at the University of Louisville.

Myron J. Gordon has been promoted to assistant professor of economics at Carnegie Institute of Technology.

Wendell C. Gordon has been promoted from assistant professor to associate professor of economics at the University of Texas.

Wytze Gorter has been advanced in rank from lecturer to assistant professor of economics at the University of California at Los Angeles.

Manuel Gottlieb has been appointed visiting assistant professor of economics at Colgate University.

J. Paul Graham has been appointed instructor in economics and business administration at West Virginia University.

Howard K. Grasher has been appointed instructor in business organization and management in the College of Business Administration, University of Nebraska.

Ralph Green has resigned as instructor in economics at Duke University to accept a position with the Federal Reserve Bank of Dallas, Texas.

Emile Grunberg has been promoted to associate professor of economics at Carnegie Institute of Technology.

Franz Gutmann has become lecturer emeritus in economics, University of North Carolina.

Earle M. Halvorson is instructor in business organization and management in the College of Business Administration, University of Nebraska.

Osmond L. Harline, of the University of Utah, has joined the staff of the department of economics, Indiana University.

Francis L. Hauser has been appointed associate professor of real estate, University of Florida.

Earl O. Heady has been promoted to full professorship in the department of economics and sociology, Iowa State College.

M. Kenneth Henderson has been appointed graduate instructor in economics at Tufts College.

G. E. Henry has been appointed instructor in accounting at Louisiana State University.

Jack Heysinger has been appointed instructor in business law at the University of Kansas.

George H. Hildebrand has been promoted from assistant professor to associate professor of economics at the University of California at Los Angeles.

Werner Z. Hirsch has been appointed instructor in economics at the University of California, Berkeley.

Henry G. Hodges has been appointed lecturer in industrial management, University of Florida.

Louis R. Hoffman has been appointed instructor in transportation, College of Business Administration, University of Tennessee.

Stanley E. Howard will be on leave of absence from Princeton University during the spring term.

John Hunter has been appointed graduate instructor in economics at Tufts College.

Leonid Hurwicz, formerly of Iowa State College, has been appointed research professor of economics and mathematical statistics in the Graduate College, University of Illinois.

Stanley F. Jablonski has been promoted from associate professor to professor of accounting in the School of Business Administration, University of Pittsburgh.

Harold Jensen has joined the staff of the department of economics and sociology at Iowa State College.

Brooks K. Johnson has been named chairman of the department of economics, University of Miami.

John L. Johnson, formerly of Michigan State College, has joined the staff of the University of Kentucky Bureau of Business Research.

Webster V. Johnson, of the Bureau of Agricultural Economics, conducted a seminar on land economics at the University of Virginia in the spring semester of 1948-49.

Manley H. Jones has been appointed professorial lecturer in business management in the department of business and economics, Illinois Institute of Technology, Chicago.

Myron L. Joseph has been promoted to assistant professor of economics at Carnegie Institute of Technology.

Edward E. Judy has been promoted from assistant professor to associate professor of accounting in the College of Business Administration, University of Tennessee.

C. Vernon Kane has been promoted to assistant professor of accounting, University of Miami.

J. Robert Karp, of Princeton University, has been appointed assistant professor of economics at the University of Florida.

Sanders A. Kahn has been appointed assistant professor of real estate at the University of Florida.

John W. Kennedy, of the University of North Carolina, has been appointed assistant professor of economics at the University of Florida.

Donald L. Kemmerer has been promoted to professor of economics, College of Commerce and Business Administration, University of Illinois.

Alison Kemp has been appointed lecturer in the department of political economy, University of Toronto.

R. P. Ketcham has been appointed instructor in economics at Michigan State College.

George Kleiner has been promoted to associate professor of economics in the College of Commerce and Business Administration, University of Illinois.

Paul L. Kleinsorge has been promoted to professor of economics at the University of Oregon.

William H. Knowles, of Humboldt State College, has been appointed assistant professor of economics at Michigan State College.

Frank L. Kidner has been promoted to professor of economics at the University of California, Berkeley.

Leonard J. Konopa is instructor in economics in the School of Business Administration, University of Pittsburgh.

John Korbel has been appointed instructor in economics at Lafayette College.

Theodore J. Kreps, on leave of absence from Stanford University, has been appointed staff director of the Joint Committee on the Economic Report.

Clarence E. Kuhlman has been promoted from associate professor to professor of transportation and public utilities in the College of Business Administration, University of Tennessee.

Carl Landauer has been on leave from the University of California, Berkeley, in the fall term to lecture at the Free University of Berlin.

Leonard A. Lecht, formerly of Columbia University, has accepted an assistant professorship in economics at the University of Texas.

G. E. Lent, associate professor of economics at the University of North Carolina, has been granted a leave of absence to serve as research associate on the staff of the National Bureau of Economic Research during the current year.

Charles E. Lindblom has been promoted to the rank of associate professor of economics at Yale University.

Robert G. Link has been appointed instructor in economics at Yale University.

Madelyn Lockhart, formerly instructor in economics at Ohio State University, is now research associate at the University of Kentucky Bureau of Business Research.

Santiago P. Macario, of Kansas State College, has been appointed instructor in economics at the University of Texas.

D. A. MacGibbon, former chairman of the Wheat Board of Canada, has been appointed visiting professor in the department of politcal economy, University of Toronto, for the current year.

Elizabeth G. Magill has been appointed to the staff of the Joint Committee on the Economic Report as a research assistant.

Jean P. Mahan has been promoted from instructor to assistant professor of economics at Tulane University.

James R. Mahoney, on leave of absence from the University of Utah, is serving as senior analyst in the Legislative Reference Service of the Library of Congress.

Arthur A. Mandel has been appointed lecturer in economics at the University of California at Los Angeles for the spring semester, 1950.

L. F. Mansfield has been appointed instructor in economics at Duke University.

William R. Matthies, formerly of Southern Illinois University, has been appointed associate professor of accounting at the University of Florida.

Davy H. McCall has been appointed instructor in economics at Western Reserve University.

J. O. McClintic has been promoted to the rank of professor of economics at San Diego State College.

J. L. McConnell has been promoted to associate professor of economics, College of Commerce and Business Administration, University of Illinois.

Robert I. Mehr has been promoted to associate professor of economics, College of Commerce and Business Administration, University of Illinois.

Lee J. Melton has been appointed instructor in economics at Louisiana State University.

Janet K. Messing has been appointed lecturer in the department of economics, Hunter College, for the current academic year.

Sebatian F. Miklas, O.F.M.Cap., has been appointed lecturer in economics in the Graduate School of Social Science, The Catholic University of America.

Charles S. Miller has been appointed professor of business organization and management in the College of Business Administration, University of Nebraska.

Donald C. Miller has been appointed instructor in economics at the University of California at Los Angeles.

Earl J. Miller has been named chairman of the department of economics at the University of California at Los Angeles.

William L. Miller is assistant professor of economics at Alabama Polytechnic Institute.

Charles N. Millican is instructor in economics at the University of Florida.

Herbert Millington has been appointed professor of marketing at the University of Miami.

George F. Mitch, of Pennsylvania State College, is interim assistant professor of economics at the University of Florida.

J. M. Mitchell, assistant professor of economics at Tulane University, has accepted a Fulbright award for research and study in France during the current academic year.

J. D. Morgan has been promoted from assistant professor to associate professor of finance at the University of Kansas.

Lloyd Morrison, of the University of North Carolina, has been appointed professor of accounting at Louisiana State University.

Will S. Myers, Jr., of Wooster College, has joined the staff of the University of Kentucky Bureau of Business Research.

Grover A. J. Noetzel has been named dean of the School of Business Administration at the University of Miami.

G. Warren Nutter has been appointed assistant professor of economics at Yale University.

Ralph H. Oakes has been promoted to the rank of professor of marketing in the College of Business Administration, Marquette University.

Guy H. Orcutt, of the International Monetary Fund, has been appointed assistant professor of economics at Harvard University.

Raymond R. Orie is instructor in accounting in the School of Business Administration, University of Pittsburgh.

John P. Owen, of Louisiana State University, has accepted a positon as professor of economics at the University of Houston.

Donald W. Paden has been promoted to associate professor of economics, College of Commerce and Business Administration, University of Illinois.

Stephen S. Park has been appointed assistant professor of statistics and insurance in the College of Business Administration, Marquette University.

J. W. Parsons is an instructor in business administration at Louisiana State University.

Robert W. Patterson has been appointed instructor in rural social economics at the University of Virginia.

Walter Pearce has been appointed instructor in the College of Commerce, University of Kentucky.

William B. Peden has been appointed instructor in economics at the University of Louisville.

Dudley F. Pegrum, of the University of California at Los Angeles, has returned from a six months' leave in Washington and Europe spent in research study.

Howard S. Piquet, senior specialist in international economics of the Legislative Reference Service, Library of Congress, is visiting professor of economics at the University of Oregon in the fall term.

A. Neal Potter is on leave from State College of Washington to serve as assistant to Wilson Compton, alternate U. S. delegate to the United Nations.

Daniel A. Preston has been appointed assistant professor of economics and commerce at the University of Chattanooga.

Leonard W. Prestwich has been appointed instructor in marketing at Alabama Polytechnic Institute.

Frank A. Putz has been appointed instructor in business administration at Marquette University.

Jewell J. Rasmussen, on leave of absence from the University of Utah, is serving as consultant in the Division of Fiscal Analysis, Bureau of the Budget.

A. N. Reid, on leave from the University of Saskatchewan, is visiting lecturer in the department of political economy of the University of Toronto for the 1949-50 session.

Arthur C. Redelsheimer has been appointed instructor in economics and commerce at the University of Chattanooga.

Jim E. Reese has been promoted from associate professor to professor of economics at the University of Oklahoma.

William N. Renfroe has been appointed instructor in economics at the University of Virginia.

William B. Ricketts has been named lecturer in marketing at the University of Miami.

Raymond W. Ritland has been appointed instructor in economics at Tulane University.

Edwin C. Robbins, Jr., has returned to the University of Oregon as instructor in economics after a year's leave of absence for study.

David R. Roberts has been promoted to associate professor of economics at Carnegie Institute of Technology.

Alan J. Robertson, of the University of Missouri, has been appointed instructor in economics at the University of Florida.

Ross Robertson has been promoted from assistant professor to associate professor of economics in the College of Business Administration, University of Tennessee.

Robert M. Robinson has been lecturer in economics at the University of California, Berkeley, in the fall term.

N. R. Roos has been appointed instructor in accounting at Louisiana State University.

Kenneth D. Roose has been appointed assistant professor of economics at the University of California at Los Angeles.

W. D. Ross has been appointed associate professor of economics at Louisiana State University.

J. Everett Royer has been promoted to the rank of associate professor of accounting and assistant to the dean of the School of Business Administration at the University of Miami.

Frederick L. Ryan has been promoted to the rank of professor of economics at San Diego State College.

Richard Ruggles has been promoted to the rank of associate professor of economics at Yale University.

Frank J. Sabella, formerly of the University of Pennsylvania, has been appointed assistant professor of insurance at the University of Florida.

James S. Schindler, formerly of the University of Buffalo, has been appointed assistant professor of accounting in the School of Business and Public Administration, Washington University, St. Louis.

Wilson E. Schmidt is serving as instructor in money and banking at the University of Virginia.

Warren C. Scoville, of the University of California at Los Angeles, has returned from a year's leave spent in France where he was engaged in research study.

Francis J. Shannon, of Wayne University, has joined the staff of the University of Kentucky Bureau of Business Research.

Milton M. Shapiro has joined the staff of the economics department of the Jewish Agency for Palestine as economic analyst.

Howard D. Sharpe, Jr., has been appointed instructor in economics at Brown University.

Charles S. Sheldon has returned to his position as assistant professor of economics at the University of Washington after serving as head of the foreign trade branch of the Research and Programs Division of SCAP in Japan.

Murray W. Shields has been promoted from associate professor to professor of economics at the University of Florida.

Irving H. Siegel, chief economist, Veterans Administration, is on leave during the current academic year to be lecturer in political economy at Johns Hopkins University.

Albert J. Sievers has been appointed assistant professor and chairman of the department of accounting in the College of Business Administration, Marquette University.

Paul B. Simpson, of Stanford University, has accepted a positon as associate professor of economics at the University of Oregon.

Reuben E. Slesinger has been promoted from assistant professor to associate professor of economics in the School of Business Administration, University of Pittsburgh.

William M. Slocum has been appointed instructor in economics and business administration at West Virginia University.

William J. J. Smith has been promoted to assistant professor of economics at the University of California at Los Angeles.

Warren L. Smith has been appointed instructor in economics at the University of Michigan.

Gerald G. Somers, formerly of the University of California, has been appointed assistant professor of economics and business administration at West Virginia University.

Richard E. Speagle has entered the service of the State of New York Banking Department as senior research analyst in the department of research and statistics.

Emil Spitzer has been appointed lecturer in economics in the Graduate School of Social Science, The Catholic University of America.

Augustus W. Springer, Jr., has been appointed instructor in economics at the University of Virginia.

R. L. Stallings has been promoted to associate professor of accounting at the University of North Carolina.

Edward F. Stauber has been appointed instructor in economics in the Graduate School of Social Science, The Catholic University of America.

H. Elsworth Steele, of the University of Toledo, has been appointed associate professor in industrial relations and personnel management at Alabama Polytechnic Institute.

John Stevens has been appointed instructor in business law at the University of Kansas.

Joseph Sulkowski has been advanced to the rank of associate professor of economics in the Graduate School of Social Science, The Catholic University of America.

Victor V. Sweeney, formerly of the University of California, has been appointed associate professor of insurance at the University of Florida.

Richard B. Tennant has been promoted to assistant professor of economics at Yale University.

Carey C. Thompson has returned to the University of Texas as assistant professor of economics after a year's leave of absence spent in graduate work and teaching at the University of North Carolina.

Don Thompson has been appointed instructor in business law at the University of Kansas.

W. S. Thomson has been appointed research associate and assistant to the director of the Institute of Industrial Relations, University of Toronto.

Gerhard Tintner, who has been on leave of absence at Cambridge University, England, has returned to Iowa State College as professor of economics and mathematics.

D. C. Townsend has been appointed instructor in economics at Louisiana State University.

M. L. Townsend has been promoted from assistant professor to associate professor of business law in the College of Business Administration, University of Tennessee.

B. F. Trimpe has been promoted from assistant professor to associate professor of marketing in the College of Business Administration, University of Tennessee.

Earl K. Turner has been appointed research associate in the Bureau of Business Research, College of Commerce, University of Kentucky.

Paul M. Van Arsdell has been promoted to professor of economics in the College of Commerce and Business Administration, University of Illinois.

R. H. Van Voorhis is associate professor of accounting at the University of Alabama.

Frank R. Varon has been on leave from the University of Texas in the first semester of the current academic year for research study.

P. M. Vukasin has been appointed assistant professor of economics in the College of Commerce and Business Administration, University of Illinois.

Gordon S. Watkins has resigned from the University of California at Los Angeles to accept an appointment as provost on the Riverside campus of the University of California.

V. Orval Watts has been appointed visiting professor of economics at Claremont Men's College.

Gordon W. Wells has been promoted to assistant professor of accounting at the University of Miami.

Bennett S. White, of the research division in marketing and transportation of the Bureau of Agricultural Economics, is conducting a seminar in marketing and agricultural production at the University of Virginia.

A. M. Whitehill is serving as acting assistant professor of economics at the University of North Carolina during the current academic year.

Howard W. Wissner, formerly of Alabama Polytechnic Institute, has joined the faculty of Tulane University as associate professor of economics.

Charles Wolf, Jr., is with the Division of Research for Far East, Department of State.

Louis A. Wood has retired from active duty as professor of economics at the University of Oregon after twenty-five years of service.

Wilson Wright has accepted an appointment as manager of the economic research department of Proctor and Gamble, in Cincinnati.

Howard A. Zacur has been promoted to the rank of associate professor of accounting at the University of Miami.

Herbert K. Zassenhaus has been promoted to associate professor of economics at Colgate University.

Raymond J. Ziegler, of the University of Omaha, has been appointed instructor in statistics at the University of Florida.

Lowell C. Yoder, of the University of Arkansas, has been appointed associate professor of marketing at the University of Florida.

VACANCIES AND APPLICATIONS

The Association is glad to render service to applicants who wish to make known their availability for positions in the field of economics and to administrative officers of colleges and universities and to others who are seeking to fill vacancies.

The officers of the Association take no responsibility for making a selection among the applicants or following up the results. The Secretary's Office will merely afford a central point for clearing inquiries; and the *Review* will publish in this section brief descriptions of vacancies announced and of applications made. It is optional with those submitting such announcements to publish name and address or to use a key number.

Communications should be addressed to: The Secretary, American Economic Association, Northwestern University, Evanston, Illinois.

Vacancies

Economic theory, principles and problems, history of economic thought: Applications are invited for the position of professor (on undergraduate level) of the mentioned subjects. Advanced Studies Institute in the north of Mexico. Rank and salary according to qualifications. Spanish speaking absolutely required. P140

Economists Available for Positions

Comparative economic systems, social economics, international economic relations, psychological frontiers of economics: Man, 45, married, European Ph.D., American citizen. Numerous books and articles; extensive experience in teaching and research; has permanent position at well-known Eastern college; prefers position with facilities for graduate teaching and research. Available in summer or fall, 1950. E108

Public finance, theory, transportation and/or public utilities: Man, 39, family, Ph.D., J.D. Seven years of university teaching experience; 4 years of federal and state research and administrative experience; 2 years of business experience; 3 years abroad. Extensive list of publications; now employed by state university; desires permanent change of location teaching and/or engaging in research at level of professor or associate professor. Will consider departmental head. Available in February or June, 1950. E234

Business, social and industrial psychology, human relations: Man, mature age, Ph.D. Outstanding references; employed; desires advancement. Available on short notice. E245

International economics, principles of economics, money and banking, national income, public finance, business law: Man, 40, Ph.D., University of Frankfurt (Main); U. S. citizen. Eight years of experience as economist with U. S. government agencies and with leading private economic research organization; now teaching at Eastern college. E255

International economics, theory, public finance, monetary economics: Man, 36, married, Ph.D., Ohio State University. Four years of college teaching; publications; academic honors; statistical and journalistic experience. Now assistant professor at state university in Far West; desires teaching and/or research position at Midwestern or Eastern location. E263

Accounting, auditing, corporation finance, foreign trade, industrial organization, German: Man, 45, LL.D.; now assistant professor at Phillips University, Enid, Oklahoma; seeks post as visiting lecturer for summer session, 1950. E277

Statistics, economic and business research, money and banking, labor economics: Man, 45, married, Ph.D. Eighteen years of experience in teaching, research, and business; publications; academic honors. Now faculty member at Midwestern university. Desires professional advancement or administrative position. Available in September, 1949. E298

Accounting, economics, money and banking, advanced cost, analysis of financial statements, history of economic thought: Man, 50, Ph.D., M.B.A., American citizen. Administrative experience in executive positions with largest world concerns; consular

experience. At present connected with large Midwestern university. Seeks professorhip or associate professorship. E300

Foreign trade, localization, economic policy: Man, 48, Austrian, at present visiting professor at a Western university (permanent permit for America). Original contributions to theory (price and foreign trade) and policy (interventionist technique); international teaching experience (Austria, Low Countries, professorial status at Oxford, head of departmentship at a leading Oriental university); 15 surveys, 8 publications and many periodical articles; high degrees. Allied government economic adviser and international expert; diplomatic and currency-banking experience; personality. Prefers post where postgraduate research direction is possible. E303

Business administration, business law, organization and finance, personnel management, insurance, real estate, the marketing group, economics: Man, married. Extensive teaching and administrative experience as department chairman and as head of school of business and economics of state university. E306

Economic principles, economic thought, economic history of Europe and United States, labor problems and history, comparative economic systems, public finance: Man, Ph.D. Eighteen years of successful experience; now employed. Desires position in state college or university; Southern or Western location preferred. E310

Principles of economics, development of economic thought, principles and practices of international trade, world economic problems, comparative economic systems, introduction to business, advanced courses in international trade and business administration: Man, 30, married, B.S. *cum laude,* M.A., New York University, 3 courses towards Ph.D. One and a half years of college teaching experience. Available for spring term, 1950. Harry Shaffer, Box 528, Athens, W.Va.

Urban land economics, city and regional planning, location of industry, housing: Man, married, 42, completion doctoral dissertation. Eight years of experience in real estate business and city planning; 2 years of economic research; excellent references; published articles. Available immediately. E312

Mathematical economics, mathematical or applied statistics, advanced economic theory, business cycle theory: Man, 29, single, B.A., working toward Ph.D.; 2 years of postgraduate work in mathematics and physics; 2 years of postgraduate work in economics. Two years of teaching experience on college level; present position pays $4,000 but more interested in position than salary. Desires position in South or Southwestern United States. E313

Economic principles, money and banking, business cycles, public finance, government regulation of business: Man, 28, Ph.D., Harvard. Four years of experience in government and banking, both in the United States and overseas; several publications; excellent references. At present at Harvard Law School. Seeks position during the 1950 summer vacation, June-September. E314

Government control of business in North America and Europe, comparative history of labor movement, social security, history of social thought, economic history of Europe, foreign business law: Man, 44, married, M.Ec., M.Pol.Sc., LL.D. European trained social scientist; director of research; 10 years of teaching experience in French and North American universities. Desires research and/or teaching position, preferably at postgraduate level. Available in summer or September, 1950. E315

Money and banking, economic theory, public finance, labor economics, accounting, business organization, history of economic thought, economic geography human relations, law and business: Man, 27, married, M.A., working on Ph.D. thesis. Four years of successful teaching at small Eastern college; 3 years as head of department; academic honors; army administrative experience; now assistant professor. Seeks comparable rank or advancement. Available in June, 1950. E316

Production, consumption, capital, labor, value, price, formation and distribution of social income, history of economic thought, business administration, money, credit, business cycles: Man, 44, Ph.D. Writer of more than ten scientific research works and essays, with more than 15 years of university teaching experience. Wishes position in economics. E317